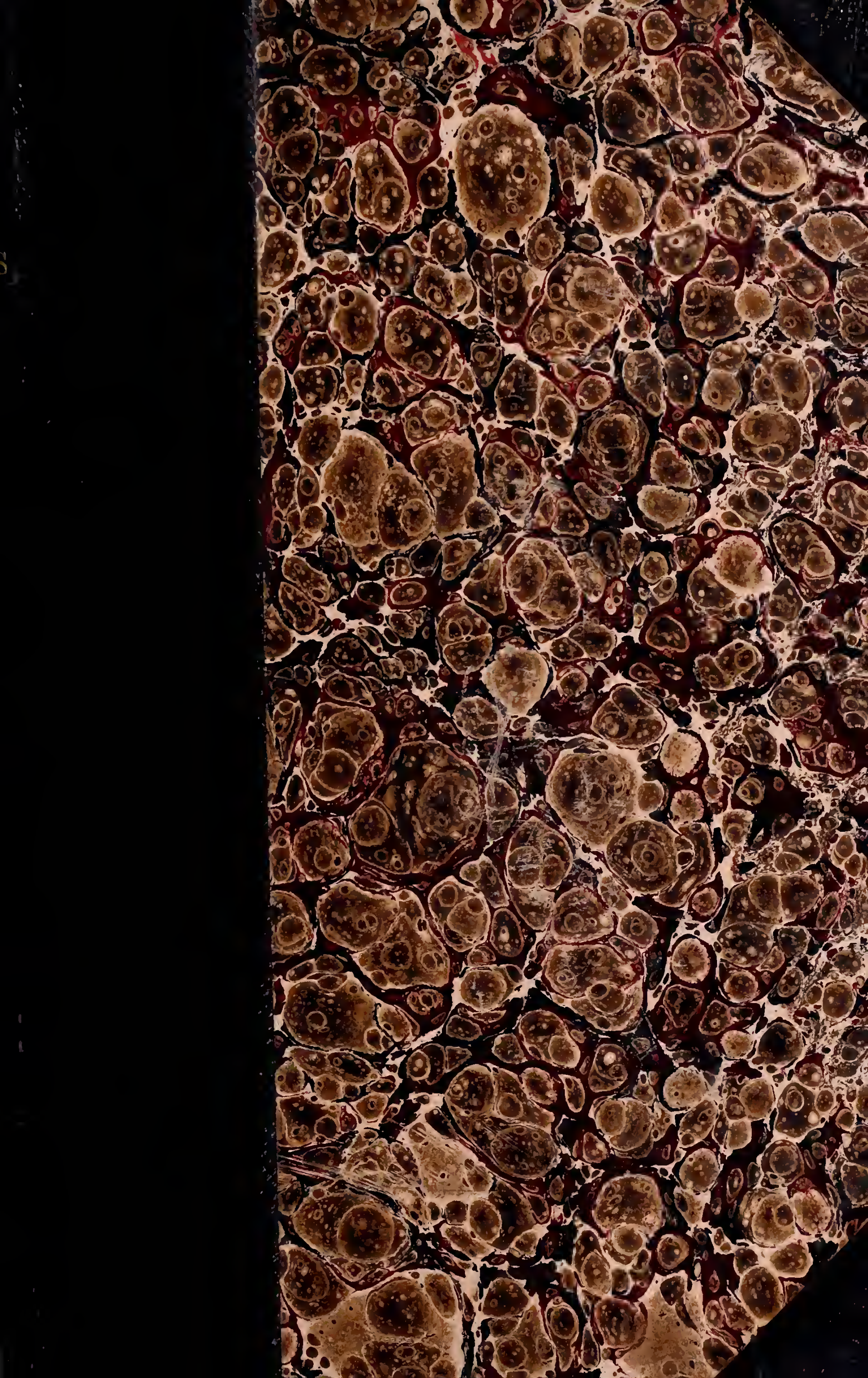

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ORIGINAL ARTICLES.

THE NERVOUS ELEMENT AMONG ORDINARY DISEASES.*

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What is nervousness? A slight quick acting girl, jumps in an excited way at the falling of a window; we say she is nervous. A healthy young man shakes at the knees in reading his first essay before a public audience; we say he is nervous. An inebriate trembles and shakes upon attempt at either mental or motor work—we say again that he is nervous. A woman over slight occurrences cries or laughs until exhausted, we say that she is nervous. Another person walks in sleep or is subject to sick headache, we say he is nervous or has nervous instability.

Still another person has extreme pains in the chest, the ovaries, back of the neck or in the limbs, with no especially marked disease symptom. We say she is nervous or perhaps more frequently "neuralgic." Another woman grows emaciated, pale, listless, dyspeptic, and weak without exhibiting any especial organic symptom; we say that she is a nervous case or has "nervous prostration." Still farther another case is easily irritated, has feebleness of mental action, has possibly a convulsion; we say that he is nervous, or is "neurotic," meaning that he tends toward nervous diseases. Again another person, older, and of intelligence, by overwork, or by over stimulation combined with too little counter physical exercise, becomes easily irritated, motorly restless, reflexes exaggerated, subject to insomnia, and considerable headache, and we say that he is nervous or is "neurasthenic," or has "neurasthenia." Finally in some variation from the above, a man shows some exaggeration of reflexes, considerable of a dyspeptic element, so-called, has a despondent outlook, palpitation of the heart, feels strong bodily discomfort or apprehension,—he is hypochondriac; or perhaps that he is "dyspeptic," according to the prominence of the leading element in the case.

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* Delivered before the Olmstead County Medical Society, at Rochester, Minn, Jan. 8, 895.

The Name :—Now, the above suggestive outline is sufficient to introduce the subject and lead us to inquire more fully what this element is that is so prevalent, and which enters into our health, so-called, as well as into our diseases. In trying to formulate these differing conditions into one comprehensive term or phrase, we are struck by their varied character. Upon due consideration, however, we should judge the term "nervous instability" to be sufficiently comprehensive with a little elasticity, to include them all, and to possess moreover the value of being a very suggestive and self explanatory term.

Nature of :—In order to comprehend the full meaning of this we must needs remember that the nervous system is no separate organ laid away in one part of the body, but is a mechanism invading every part of the whole, and so interdependent that impairment of one part affects many others. We find it, moreover, to possess centers, which are storehouses of energy, for all of the other organs, inciting them to work.

We find nerves that need a certain amount of stimulation for their response, said to be normal. And when much more of response is obtained by the same stimulation, they are said to be abnormal, or nervous or irritable. Farther than this, in different persons, we find various degrees of response to the same stimulation, and find that we must allow a wide latitude to be included within the term normal. We must assume at once, then, varying degrees of stability for nerve cells and fibers. This, on a little consideration will probably seem most rational to us all, and in accord to all our experience. We know that the nervous system as a whole differs in different people and can easily step to the belief that each and any particular part of the individual, or each particular nerve cell varies in like manner. That is to say some nerve cells will withstand the stimulation of cold, of electricity, of emotional elements, of fear, of alcoholic and other toxic effects, much more strongly than will others.

The studies of Professor C. F. Hodge, of Clark University, help us out here. They show practically and experimentally, that nerves by repeated stimulation tire and lose strength even as we know our muscles do. Moreover, he finds these cells to show a decrease in quantity or shrinking upon such stimulation, and a corresponding increase with rest. If we accept these experimental findings, then, we are in position to get clearer ideas of phenomena observed.

Origin of :—Our next question will then be, from what source does this power of the cell come ? What gives it its degree of stability or its resisting power ? And we should reply : 1st, from natural or inherited endowment ; 2nd, from conservative forces of good living and environment. Of these two, the natural endowment, the inheritance, seems by all odds the more important element. If a person has that endowment which tends strongly toward insanity, for example, the environment will not often have to be very strong to bring on the attack. If one has that endowment which predisposes strongly toward nervous exhaustion or nervous instability, very slight causes will precipitate it. If very strongly away, extreme causes can not bring it on.

For another example, in examining many inebriates, we find that some men can stand but little alcohol ; others can stand large quantities and never be nominally drunk. We find also that no environment changes the second man to the susceptibility of the first. The mere exciting causes in all these troubles are but the smaller part ; the inherited cell strength or resisting power is the main thing. One person is hysterical, another under the same circumstances and mode of living is not ; can this mean anything else than a different inherited endowment, or resisting power of cerebral cellular structure ?

Forms of Nerve Failure :—Our next inquiry and effort will be toward collecting the various so-called states, or diseases, which would be comprised as developing from this condition termed "nervous instability." Quoting roughly from a former writing, we would enumerate them as follows :

1. Nervousness, a simple, quick, or excessive reaction to ordinary stimulants, physical or emotional. The examples are found in the persons who jump at a loud noise, who tremble readily at fear, who cry at slight causes, etc.

2. Neurosis, a bent toward some special functional disorder.

3. Nervous exhaustion ; an easy tiring out of the nervous system. In these cases there seems to be weakness and sickness from a lack of motor nerve cell energy. Exciting causes are varied, but the mental element is usually prominent.

4. Neurasthenia ; (as a disease, not as nervous temperament.) A nervous and motor irritability and nervous weakness ; as compared with the preceding, less of the profound exhaustion and more of the unstable, irritable, mental and motor state.

5. Spinal irritation, which may be called a localized form of neurasthenia. This peculiar trouble, sometimes called spinal anæma, is yet seemingly another of these manifestations, peculiar chiefly in its location.

6. Some forms of hysteria, such hysterias as go with spinal irritations, or other nerve failures, and tend toward a great exaggeration of some few symptoms, with morbid mental action. The mental phenomena vary along with the motor or sensations, quite equally in some of these cases.

7. Hypochondria has usually a strong element of this instability, the cerebral or mental element predominating.

8. The tendency toward the grosser mental and motor diseases. Though often losing some of the finer and more obvious unstable actions, yet these are gross manifestations of the same, often under the head of neuroses. We refer to such diseases as migraine, chorea, paralysis agitans, epilepsy, and perhaps the pure psychoses.

An explanatory note may perhaps well be interlined here. The blending of physical or motor signs, with the mental tendencies which we here outline, though perhaps not a general custom, yet as they customarily blend in the cases as seen, we would naturally follow the same trend and consider them as mingling in various proportions in the cases under question.

The Signs of this Nervous Temperament : But, it will be asked what are the symptoms or signs by which we can recognize this condition of nervous instability in its predisposition stage or as a temperament ? This temperament, to which so many of us are more or less subject. We must admit that it is somewhat difficult to recognize this condition accurately or in every case : As we look around among our patients, or indeed among the general population about us, how can we designate degrees of nerve instability (or if you prefer of nerve stability) in each ? We can often do this after their failure into defined diseases states, such as designated above ; and in the light produced by them make quite positive declarations. Can we do so before such failure ? In answer we can only say that while we can not perhaps always do so, or surely, yet we would aim to try to do this in general practice. Once assured that such differences of constitution exist, we should assuredly try to read them. The deciding upon this state, can be compared to deciding on the existence of consumptive tendency. Inasmuch as we are to find a real though somewhat illy defined diathesis.

But we can enumerate some of these signs. Taking first physical signs, we can say that the nervous man is usually spoken of as one of spare build, though there are so many exceptions as to make the point of lesser value. His movements are quick and prompt, his reaction time is short. Mentally his attributes will also be quick and prompt as a usual thing. This nervously quick action at times passing easily into the unstable is quite common among us. Such a one often does a great deal of work, but on the other hand, falls often among the hysterical type, and the work amounts to little.

Pursuing our quest among objective signs, we may perhaps consider the complexion : A clear complexion with fine hair, has been said to indicate a nervous temperament. Indeed the consumptives are apt to be nervous people. Tremors are commonly said to be a sign of nervousness, but so varied are tremors that the meaning has to be assigned in each special case. In a broad sense, tremors are due to a lack of nervous tone, produced by alcohol, by toxic agents, by cold, by weakness, by fear, by poor nutrition, by overwork, by over emotional stimulation, as well as by habit and various obscure causes.

Intellectually the person is apt to be very active and often acute above the average. This being true, even when the trend is more toward insanity than toward nervous diseases. The purely intellectual powers do not seem to vary much with the stability or instability of the case, though its quickness does. Very frequently, however, this activity is more of the sparkling, evanescent, type, and is not powerful for permanent work.

Passing the objective signs, we find in the history of the case usually the richer fields of information. We will ask concerning tendencies towards somnambulism, about talking in the sleep, insomnia or broken sleep. Here we find more significant symptoms.

We may then inquire, or indeed better find out from a third person or a physician, if the person is easily delirious, easily feverish, easily affected by alcoholic stimulants. We may then vary our inquiries a little and ask for neuralgic troubles, perhaps including the dyspeptic. Has the patient had spasms at any time ? Has he morbid and hypochondriacal trains of thought ?

We may take up more specially mental lines and ask if the person is easily moved emotionally, easily afraid, easily hopeful or easily depressed ? Is he a man of enthusiasm, dashing into one line of work with great vigor and impulsiveness, to perhaps take up the opposite or contradictory line with equal vigor the next year ? A bird's-eye view indeed of the person's whole life is really needed for the greatest accuracy of judgment, to be studied with the caution that there are various though hardly contradictory types of this nervous failure, which are only to a slight extent interchangeable in the same person. If the person is possibly of a hysterical type, we may ask after various diseases, in respect to their history, and study as to whether they really amounted to anything or were merely nerve storms. It is very suspicious, if a woman says that she "always keeps up until she positively can not stand any longer," or that "it is just her strong will that keeps her up." The strength of the introspective habit, in these cases, intensifies the morbid ideas, a good deal as pure weakness might do in other cases. Is the person subject to morbid ideas, to persistent ideas ; or to so-called unreasonable times ?

The question of sex differences, is too extensive a one to discuss, although as is well known the female sex has a much more easily moved nervous organization than that of man, and her modes of life tend towards a more frequent development of the functional forms of nervous diseases.

Illy defined as this nervously predisposed constitution is, blank as the histological examination of the cells may be, yet it seems real and undeniable. Why does one man become insane and another not ? The exciting causes seem to have little to do with it, and the physical conformation is very indefinite. The answer must be, that the nerve-cells have that nervous predisposition which gives away under such causes. Why does one man become an inebriate while another can drink indefinitely ? Why is one man always hopeful, another naturally depressed ? Why is one man hot-tempered, another always cool? Why is one a genius, another a plodder ? Can anyone logically assert that this is all hit or miss chance, and deny the existence of an inherited natural constitution ?

Some Examples :—We would lightly refer to some cases, to accent the previous statements. Beginning with the more mental types of trouble, we are led quite promptly among the hysterias. To ordinary cases I would only simply refer. I would, in passing, mention a case of a quite typical convulsion after the pulling of a tooth in a girl who was under strong mental strain, but who had never been called hysterical. Indeed, even the nurses about said afterward that they thought the toothache itself was only nervousness. Also another girl who had a fit of laughing after the same operation. A more peculiar case, however, is that of a girl who was of extra mental and physical ability in managing a ward, but who was a subject of attacks of spinal irritation before mentioned. She received several abusive letters, the author of which after long search was found to be herself. She even at a later date sent herself a valuable valentine. This girl was seemingly capable quite above the average, as indeed most of the hysterias that I have seen in young girls are. In hysteria, of the more purely cerebral form, the idea is to get fixed the first hysterical sign, and then always be on the lookout for the element in the future.

Of neurasthenia, we have a condition illy defined chiefly because like hysteria, it varies in form with each case. The condition of morphine eaters, and of some inebriates, present quite pure neurasthenias. Morphine eaters usually have a large share of the cerebral, or mental lines, alcoholics less so. The nervous unrest, the nerve hunger of the morphine eater, once followed through the abrupt withdrawal of the drug is a valuable lesson.

There are several kinds of neurasthenia to be easily separated. (1.) The kind following toxic drugs, such as alcoholism, morphinism, etc. (2.) The form following extreme brain overwork and sedentary habits would probably vary considerably, having more of the cerebral and less of the physical elements. (3.) The form preceding gross brain troubles or senile atrophy, would be more obstinate and untreatable. In all, however, the elements would be something as follows: Headaches which are less aches than stuffy, indescribable feelings in head and back of the neck,—peripheral, crawling or twitching sensations,—peripheral pains,—loss of mental power, of attention, insomnia, exaggerated knee jerks, the whole forming a state in which the person is quite miserable without showing objective signs or being able to make it clear. All too often, even the physician is apt to give countenance to the idea of an imaginary, needless worry and a moral obliquity. It is usually a real state, for which the person is about as responsible as for other diseases and no more.

Of spinal irritation,—the girl first mentioned furnishes a good example. More or less periodically in her case would come headaches, so-called, usually located in the back of the neck, at times confining her in bed for a day or two. At one time this produced a quite typical croup, including loss of voice, and accompanied by twitchings of the hands, head thrown back, seeming mental torpor, all combining to form an attack of nearly one week's duration. Another quite extreme case of spinal irritation had somewhat periodically the extreme tenderness in the small of the back. The symptoms corresponded to the nerve distribution of this location. There was always loss of appetite, she seemingly eating almost nothing at times for from one to two weeks. She was subject to diarrhœas, constipation, retention of urine, and always in varying localities, tenderness and pain. There was always extreme headaches, and usually some localized pains. At one time there was complete anæsthesia of one leg, so that pins could prick clear through the limb, and there was seemingly anæsthesia to sensation complete. These attacks came on in waves; and the periodical come and go of such troubles is a good diagnostic sign.

Of epilepsy, chorea, etc.—It is to be said that the grosser motor disturbances tend to either cover up or exclude the minor elements. Of migraine, however, it seems to be well said, that it is a symptom of nervous constitution. It seems often to be a neuralgia of such sudden onset as to produce stomach and constitutional disturbance. The nervous temperament, however, is perhaps better seen in the less gross types of nervous disease.

Combined With Other Diseases:—These elements we have enumerated as very frequently constituting a condition by themselves. But they by no means exclude other gross bodily disorders. While the hysteric or neurasthenic will rarely show the hysterical or neurasthenic element in cholera or peritonitis, yet in the lighter, or more chronic troubles, such as diarrhœas, consumption, Bright's disease, bladder troubles, etc., he will frequently do so. Given this element of nerve instability as showing itself in one form or other in a lesser or greater degree in a very large proportion of our population, as being at times in its extremes an object of treatment in itself, in nervous exhaustion, spinal irritation, etc., we would also consider it as an element mingling with other diseases, confusing and blurring the diagnosis and treatment.

Of these other troubles, gynæcological diseases seem to hold first place easily. Indeed in many cases the ovarian trouble is a pure irritation cerebral in origin. In other cases, the nervous irritability needs an exciting cause, and this is usually furnished by lowered general health and nutrition, and needs tonic treatment for its recovery.

In many cases, of course, the gynæcological troubles exist; but there is growing conviction in my mind, as I see cases of insanity at the hospital, that the nervous starvation, or perversion, was the more powerful causative element. By right living the other troubles would not be noticed.

I have thought at times that the fact of my living in a hospital along with the patients and seeing their daily life, has made me see more clearly "temperament" as a predisposing element. Especially in the 150 or more young and supposedly healthy employes of the hospital, it has shown itself very clearly at times. If we push the definition of hysteria to its broadest sense of all "functional troubles," it only means that some traces of excessive nerve instability can be very frequently found in all of us, although I have felt that few agree with me as to the extent of this invasion, yet my conviction has been a gradually growing one.

Probably we are all familiar (passing to other forms of disease) with the gastric pains, the diarrhœas, the constipations, the insomnias, the headaches, and other counterfeit irritations of that peculiar type, spinal irritation, even though it is not always easy to separate them at first sight. If I mistake not, many of them occur without our finding the "spinal irritation" part at all, and are not essentially different in kind—we then call them neuralgias. For example, a few weeks ago a young girl was quite suddenly taken with spasmodic jerking back of the head and extreme pain in the back and one side of the neck. She was large and strong and intelligent, but a person who had occasional headaches and somewhat of anæmia. It was, of course, called neuralgic, and passed off in one or two days. Another girl had pains in the left breast, toward the left of the heart. These, although she was a large and healthy girl, continued with her more or less for several months, once or twice calling me up in the night on account of extreme distress. No connection with any disease was found, and it was termed "neuralgic."

I might also mention the case of a young lady, who had considerable pain in upper surface of one ankle, which grew for two or three weeks, until it became so extremely painful that she had to stay at home. There was reported some heat, slight redness, and swelling. A vague history of a tight shoe was given, and a quite able physician after seeing her a number of times diagnosed inflammation of the sheath of the tendons. The girl was in great mental distress at the stopping of her work. After seeing her in consultation and formally concurring in the diagnosis, it nevertheless gradually grew upon me that here was another case of nervousness. The girl was strong, healthy, lively, and amused at the necessity of being shut up for such a trifle, and later even seemingly half suspected that it was not an organic trouble.

The subsequent history made me sure of this diagnosis, and confirmed me in the habit of looking out for this element in all cases. Only a day ago I was called up to see a woman who had a severe chill with severe vomiting, even so extreme as to show blood in the vomit. That the pulse was about 90, was almost enough. That she was menstruating at the time seemed to have little connection. That upon giving her stimulants and morphine she was partly out of her head the most of the night, was quite conclusive, while a history obtained the next day of preceding chills, completed the account.

I can not multiply cases. The cerebral troubles, the psychoses, are all partially nervous in their onset. Even such a gross thing as general paresis, is in the first stage perhaps only a state of nervous instability or irritation. Indeed, it has been even said that in the first stage it is a functional curable form ; going on of course to a progressive and gross disease. This statement of course could not be proven.

I can only say a few words as to the treatment, I feel strongly that the most universal cure for all these troubles is a change of scene and life. Girls gradually paling, having headaches, insomnia and lack of appetite, treated by drugs, ad nauseam, yet brighten up wonderfully in a month if sent to the old home, or out on a farm, or out on some vacation trip ; and in this cure-all, it is to be noted, that not the physical life alone, but the mental vacation as well must be seen to.

Five or six years ago when I suspected a headache or pain to be of neuralgic character, I would give a dose of Citrate of Caffeine, and if it tended to relieve the pain it was an indication of neuralgic origin. It did relieve a quite large proportion. More recently we mix a strong dose of Phenacetine, 8 grs., Cit. Caf., 3 grs., Tr. Val., 2 drs., Antipyrine, 5 grs. and Port wine and give in 2 doses, sometimes in one dose. This, perhaps, by reason of its size, will seemingly at times cure a sick headache, and even prevents one that has withstood all previous doses. It will relieve these nervous headaches and pains especially well.

For a permanent course of treatment, our elements must be somewhat different. Galvanism from 2 to 10 milliamperes, applied to back of neck and spine, and over localized neuralgias produce often temporary effects, and frequently a good permanent tendency. Counter irritants must not be forgotten of course, in all spinal irritations, and in many in which tenderness is not to be found. Tonics and digestives are to be given, and a hopeful train of thought is to be encouraged.

Look out then, for this nervous temperament. If it is strong, use its mobility towards hopefulness; for hopefulness often cures the functional types and is the basis of much of the present quackery. Avoid alcoholics, for the system reacts from their use, and calls for more. Avoid the use of morphine in any excess, except in organic complications. Avoid excessive work and excessive emotional play. Use hygienic measures as far as possible. Nutrition should always be seen to. Opium is recommended by Dowse as very valuable in pure neurasthenia, so-called; $\frac{1}{3}$ grain 3 times a day. Hypnotics are valuable in cases in which insomnia is causing the perpetuation of the physical state. Of course the neurasthenic state is often caused by other physical disorders which need treatment. All toxic and antitoxic elements need elimination.

In the way of prevention, doubtless much can be done, if, fortunately the physician be asked, and patience be had on the part of the parents, in carrying out the ideas provided. A child of nervous tendencies will tend to develop too great activity. This should be restrained. Study and emotional life should be steadily repressed toward the normal; much outdoor life should be secured. All tendencies toward being a prodigy, which is so often a matter of congratulation by parents, should be, instead, repressed. Not only should this be done because the developmental period is most important, but in order to as far as possible establish good habits. The bright perceptive mind with its easy emotional play and its enthusiasms will lead naturally to that excess which it should especially avoid, and to which its slower associates are in no way subject.

In conclusion, I quote with some changes from a previous writing. "It is fit to inquire what is the most healthy state? Is the nervous, highly wrought, spare, thin man, full of enthusiasm and nervous action, living two or three years to the ordinary man's one; is he the most normal one?" The answer is a little doubtful; yet it would seem that the nervous man, though very attractive, though often the strong moving power in a community, is yet not of the type for enduring effort. He is apt to break down along nervous lines; he is apt to degenerate earlier than ordinary senility. He is apt to have sickly or unstable children, especially those who are born while under extreme mental effort, and only a strong conservative brain restraint will save him for the long race.

The typical man would seem to be less of the nervous type and more of the lymphatic character, perhaps intermediate between the two temperaments. He would have a strong, steady, unvarying motion, not extremely quick to act, though fairly rapid in movement, with brain and nerves that look steadily and calmly on irritations and calamities. Backed by a healthy, strong body, such a man is a power in the long run. He is a steady landmark to which people look for dependence, and is fairly sure that his children will be strong and healthy also.

Of this typical nervous development, Clouston with his acute observation says, "its energizing must be stable, and yet its nerve tissue must not be too stable, otherwise its highest function would be deficient. For a nerve cell that would not let out its stored-up energy readily on an appropriate stimulant would be almost useless."

We are none of us "ideal" in temperament or tendencies likely, yet I personally think there is great value in recognizing my own tendencies (for I do not speak as one exempt). Perfection being denied us, we can yet adjust ourselves somewhat to our imperfections.

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MALNUTRITION—PRACTICALLY AND PHYSIOLOGICALLY CONSIDERED. A SUBJECT OF GREAT IMPORTANCE TO THE SPECIALIST AS WELL AS TO THE GENERAL PRACTITIONER.*

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Malnutrition cannot be classified as a distinct disease, and yet in its relative importance, as a subject of study, it should have a well recognized place in the literature of medicine.

Correctly defined, it is an incidental symptom, or rather a condition, but always one to be considered with the greatest care in the scientific management and treatment of disease.

The energy producing and spending capacity of all animal bodies depends directly upon the activity with which the processes of nutrition are conducted and maintained. The continued accomplishment of this essential requisite makes it necessary that a large number of organs and functions shall be in good, if not perfect physiological order :

1. There must be a comfortable condition of mind and body, and a relish or appetite for food.
2. Mastication must be complete, and the stomach capable of receiving and holding food.
3. The digestive fluids must be sufficient in quantity and up to standard in quality.
4. The absorptive capacity of the blood vessels and lymphatics along the alimentary canal must be active and effective.
5. The peristaltic and eliminative work of the bowels must be normal.
6. The heart's action must be sufficient in force and regular.
7. The blood must be suitable in quality and in oxygen carrying capacity.
8. The processes of tissue assimilation must be physiologically correct.
9. The elimination of waste matters through the excretory organs must be properly and effectively accomplished.

If we consider for a moment this large and formidable array of functions and processes necessary to perfect or normal nutrition, it will be easy to understand that diseases, indiscretions, imprudent indulgences and exposures of any and every kind, may readily serve to upset or otherwise disturb some one or more of them, and thus lead in the end to malnutrtition.

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* Read before the New York Academy of Medicine, March 7, 1895.

The intimate relationship of the nervous system to the various organs and functions of the body, serving as it does to unite and harmonize the one with the other, accounts for the fact that organic diseases, of any gravity whatever, are sure to disturb a number of these nutritive functions. Especially is this the case when the febrile centers become excited and the elevation of temperature reaches a high degree. It is an old proverb worth quoting "That when fever comes in, appetite gets out," as a rule, nothing can be truer.

When illness or disturbed functional conditions have continued for any length of time, the active symptoms of malnutriton exhibit themselves in loss of appetite, defective digestion, abnormal bowel action, paleness or anaemia, weakness and langour or lack of energy production, feebleness or depression of heart's action, nervous disturbances, loss of weight, emaciation, etc.

In the treatment of acute progressive diseases, in conjunction with an effort on the part of the physician to combat, or to facilitate, as the nature of the case may require, the active pathological changes which are taking place, he endeavors by every possible means to maintain the nutrition of his patient. This he does through the agency of the most nourishing and at the same time the most easily digestible food at his disposal, stimulants, etc.

When disease becomes quiescent, or is at an end, the work of "building up" or rather of repairing the incidental damages begin.

This consists largely in correcting the functional disturbances and malnutrition which has been induced. In so doing, it is a recognized truth, that in greatly the majority of cases this affords the promptest method of healing or restoring to a normal condition any pathological lesion which may be found to exist.

Here I desire specially to impress the fact, that in general medicine, there are but few well established specifics. In surgery the knife may be regarded in many instances as a specific remedy, and certainly as one of inestimable value for the removal, when necessary, of diseased parts. The practitioner and the specialist, independent of the knife, finds many local remedies almost specific in their action, as the gynaecologist, the eye and ear, nose and throat, skin and other specialists will verify. But whatever may be their capacity for treating and relieving certain pathological conditions, it must be conceded that the removal of any evidence of malnutrition and the improvement of the general health of the patient plays a most important, and often the essential part, in effecting a complete restoration.

This is best accomplished by looking over the various functions and processes necessary to nutrition and getting them into good working order, then by means of tonic, suitable food, fresh air, etc., the patient secures his best possible chance for perfect recovery.

It is interesting to note the fact, that when by proper attention the physician has successfully overcome the symptoms of malnutrition, his patient will be heard to say months, or even years afterwards, that he has never been so well as since that spell of illness he had, which he really thinks has proven most beneficial to him. On the other hand, when proper attention is not given to a complete reparation of the damages, nature struggles unaided up to a certain point, stops its efforts, repair is incomplete, and the patient will be heard to say, "Well, I have never been right since that spell of sickness I had last spring," or whenever it was. This shows the necessity in all cases of restoring the nutritive functions, if possible, to their normal condition before pronouncing the patient cured.

In the treatment of malnutrition many physicians declare medicines of no value, and trust entirely to good food, exercise, fresh air, mild stimulants, wine, etc., and change of climate.

These are all admirable aids to treatment and in many cases may be sufficient in themselves to accomplish complete restoration, where the means and leisure of the patients will enable them fully and intelligently to carry out the plan, but vastly the majority of cases will be greatly benefited and hastened in their recovery by judicious medication.

As stated, malnutrition has, as its exciting and primary cause, disease and functional disturbances of every kind ; hence, scientific rules at once suggest the removal, as far as possible, of any original cause, and if not removable its treatment in accordance with the pathological conditions presented. While this is being done, every attention must be given to the disturbed functions which lead to a loss of appetite and a consequent inability to receive and dispose of a requisite supply of nutritive food.

No fever being present, the first point to consider is the condition of the alimentary canal and the secretions which are necessary to the performance of its functions. The bowels should be made free from objectionable residues, and kept clean by gentle purgatives or salines as indications may suggest. Often the judicious use of mercurials without or in combination with other purgatives, especially rhubarb, is of the greatest value in exciting the biliary secretions and giving preliminary tone to the canal.

Among the newer remedies, Cascara Sagrada is of unquestioned value, and is greatly enhanced in its utility, when frequent administration is required, by its combination with some active diastatic preparation such as malt or one of its modifications.

Whatever loss of appetite may appear to have as its original cause, it will often be found to be immediately due to an insufficient flow of the digestive fluids, which, as a rule, leads to a coated tongue and to digestive disturbances. In these cases, especially when no fever is present and the active processes of acute disease are at an end, are the bitter tonics indicated and found to be of the greatest value. They excite secretion by direct local contact and should be taken immediately before eating.

Catarrhal conditions of the stomach and upper portion of the intestinal canal leading to the same results, are a common consequence of imperfect digestion during illness, over feeding and of alcoholic abuses Hydrastis (the fluid extract) and its preparations are admirable and almost specific in their action. Hot water properly administered is also decidedly beneficial.

In many instances where the introduction of food leads to gastric discomfort, if not to actual pain, most excellent results may be obtained from the use of an infusion of hops (an ounce with two drams of ginger to the pint of boiling water), a small wine glassful immediately before feeding.

Continued defective nutrition from almost any cause, especially from febrile disturbances, tend directly to interfere with the blood making processes and to establish anaemia.

As soon as the red blood globules become altered in quality and in quantity, the oxygen carrying capacity of the blood is diminished in the same ratio. The digestive fluids are impaired in quality and disturbances take place from that cause. The processes of endosmoses and exomoses also depend largely upon the condition of the blood, and absorption becomes incomplete.

All the chemical changes which depend upon a requisite supply of oxygen for their accomplishment, secretion, assimilation, tissue oxidation, elimination, etc., etc., are rendered abnormal.

The establishment of these conditions soon leads to loss of appetite, indigestion, langour, weakness, nervous disturbances and one or more of many unpleasant symptoms indicative of malnutrition. Hence, to recognize anaemia in whatever phase or degree it may present itself, and to correct its evil influences, is most important. In many instances a simple improvement of the appetite and of the digestive functions, together with fresh air, etc., is quite sufficient, but it is often found that the deficiency in haemoglobin, the oxygen carrying element of the red blood globules, cannot be restored by ordinary or natural methods, and additional medication becomes necessary.

Fortunately iron which enters so largely into the composition of haemoglobin provides, as a rule, a positive remedy for this difficulty when favored by proper hygienic surroundings. Though the preparations of iron are almost innumerable, I cannot say that there is much choice between many of them. Any fairly good preparation will usually answer the purpose. If the appetite is defective or absent, the combination of iron with some one of the bitter tonics, often adds greatly to its efficiency, and should be so prescribed.

When digestion and absorption from anaemia or other causes have become impaired, experience teaches us the importance of introducing the most digestible food possible, and when the quality of the fluids has been altered to any extent, whether during or following upon illness, it is advisable if not necessary to administer partly digested foods, such as peptogenized milk, koumyss, matzoon, malted milk food, beef peptones, essences, extracts, etc., etc.

When appetite has been partially or completely restored and discomfort follows the introduction of ordinary food it is a matter of special importance, in order to treat intelligently, that we discriminate with some degree of accuracy between the many conditions which lead to this disturbance and which are commonly recognized as evidences of indigestion or dyspepsia. The most frequent causes are catarrhs of the stomach and upper intestines, neuroses, and deficiencies in quantity or quality of the digestive fluids. Catarrhal conditions have already been spoken of.

Neuroses must be treated in accordance with the indications of each special case. Deficiencies in quantity, as stated, by bitter tonics and an increased fluid diet.

Deficiencies in quality have a wide range of causes, effects, and means of relief, consequently cannot be properly considered within the scope of this paper. Yet, in a general way, I should like to say, that each one of the digestive fluids, when disease or malnutrition has reached a sufficiently advanced stage to bring about the result, is liable to have some one or more of its essential ingredients so altered in character and efficiency as to render the fluid incapable of properly performing its normal digestive functions. In such cases we cannot analyze these fluids, hence are forced to simply consider the symptoms of each individual patient from a practical and physiological standpoint.

Recognizing, as it is best we should, the old and yet unimproved classification of food elements under the heads of

1. Inorganic matters, water, salts, etc., requiring no digestion.

2. Albuminoid substances, meats, albumen, casein, and such like, which must be properly converted into peptones : and

3. The hydrocarbons, starch and sugar for conversion into glucose, and fats for emulsification, enables us, by closely observing the effects or disturbances produced by each class when introduced, to determine quite accurately the cause of the defective digestion. The distress or discomfort afforded by errors occurring in the conversion of either the albuminoids or the hydrocarbons, as a rule, differ suffi-

ciently the one from the other for diagnostic purposes. If, on the other hand, the case seems obscure, it will be found easy by adopting a single food diet, or else by excluding one article after another from the usual diet list, to ascertain the cause. When fully determined there will be no difficulty in selecting from among, I might almost say, the ten thousand preparations of more or less value, that now deluge the modern drug shops, some suitable one to facilitate or aid in the digestion of the one or the other class, while efforts are being made in a scientific way to alter and improve the general system, and thus to correct the error in secretion.

That pepsin and its combinations, papain, papoid, diastase, pancreatin, extract of pancreas, acids, alkalies and many other digestives which are being highly advocated, appropriately and judiciously administered, have all a special range of usefulness there can be no doubt, but some judgment must be exercised in order to make a proper selection and thus to secure the desired benefits. While these ferments or digestives are more direct, and possibly more specific in their actions, there are other most important aids to the processes of digestion which are very universally, though often very indiscreetly taken, as well as prescribed. I refer to alcoholics, which in almost any form judiciously mingled with the food during a meal, are of value, serving in its speedy absorption and combustion, and in its stimulative effects, the same relationship to food and its digestion, that the more rapid combustion of paper and kindling wood holds to coal in starting a fire. Wines of one sort or another and even the stronger liquors are frequently prescribed in suitable cases with most excellent results.

The malt preparations are also of great value, especially those containing a bitter element, not too much alcohol, and a fair amount of nutritive matters.

Black coffee after dinner has its beneficial action as a consequence of its bitter properties, which aids in exciting secretion ; and of the caffeine it contains, which provides a desirable cardiac and nerve stimulant.

In correcting many of the unpleasant features of malnutrition, it will be found that a prescription containing some malt preparation abundant in nutritive and diastatic properties with an agreeable wine and some pleasant sedative to the nervous system (which is so often disturbed) will prove a decided aid to treatment, administered after meals.

In the malnutrition of wasting diseases the suggestions already offered are largely applicable, but the addition of easily digestible hydrocarbons, such as cod liver oil and its preparations, are often of the greatest value. They at least provide a very available and easily combustible food, which in many instances serves to lessen, if not to stay the processes of tissue consumption.

There is still another type of malnutrition with which we frequently meet and have to contend, which is interesting in the fact that it is not the outcome of any special or well defined disease or disturbance, but rather of habits and neglects, often dating back many years, if not to childhood. I refer to that form which is exhibited in those with whom we meet in every day life, and who present a thin, rather emaciated and badly nourished personal appearance. Many of these cases pass through years and even a lifetime without disease or serious discomfort, but when we are consulted by them, or have an opportunity to investigate their general health and habits, we usually find many excellent reasons why their nutritive conditions have been defective.

Vastly the majority of these cases are due to a failure on their part to take a sufficient quantity of fluid nutriment to supply the physiological needs of the body ; they are not aware of the fact, and physicians often forget that water enters into the composition of the body to the extent of from two-thirds to three-fourths of its entire weight.

That digestion, absorption, the circulation, tissue interchange, and elimination, all require an abundant supply of fluids, and that to increase the healthy weight of the body not a pound of flesh can be formed and added without the utilization of two-thirds of a pound or more of water in its manufacture.

These cases will, as a rule, be found to suffer more or less from dyspeptic symptoms and from constipation. Neuralgia, headaches, nervousness and other disturbances are also frequent accompaniments. Many of them are large and often ravenous feeders, and the wonder of the non-professional observer is, where do they store away so much food, and what becomes of it? as the eater still continues thin and scrawny. . The simple explanation is, that the greater part of the solids taken pass through the intestinal canal as undigested and unabsorbed material, and is finally emptied into the water closet.

It has been my experience that a great deal can be accomplished for this class of patients. Digestion and absorption can be improved, the diet and methods of feeding regulated, and the supply of fluids so increased as to greatly facilitate the processes of secretion, assimilation and elimination.

When on the other hand the appetite is poor and a meager or insufficient quantity of food is being taken, any organic or functional irregularities should be closely looked after and corrected. Tonics and digestives are then administered, and when the appetite becomes fair and digestion improved, I usually direct the patient to eat and drink as liberally as he likes at his regular meal, and one hour after to take a supplementary meal consisting of nearly or about a pint of some liquid nutriment.

Rich milk is preferred, as I believe it to be the most fattening of all fluids, when it agrees well with the patient.

This provides three extra pints of fluid per day, and is taken in a way not to interfere with the appetite for the coming meal.

When pure milk does not agree or cannot be taken, peptogenized milk, koumyss, matzoon, buttermilk, beef tea, chicken soup, gruel or some other nutritive liquid should be substituted. Under this treatment modified as indications may suggest, many pounds may be added to the weight of a majority of these cases, if faithfully kept up for a sufficient time.

The advancement which modern knowledge and science has made in practical chemistry, especially as exhibited in food products, and in our ability to aid and strengthen the digestive processes, has proven of inestimable advantage to the medical man, and has probably done more to facilitate his efforts in combating the evil effects of malnutrition than in any other department of medicine.

It is of course impossible for one paper, or even for one man, to present more than a small portion of what there is to be written upon this broad and almost inexhaustible subject of malnutrition, but if this article will serve to suggest an additional thought to some one of my hearers; or will induce the presentation of still more valuable ideas from some other source, I shall feel highly repaid for what I have said.

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Common Mistakes of Doctors.

To promise a patient that you will cure him ; to promise to call at an exact specified time ; to promise that the malady will not return ; to promise that you can render more efficient service than your fellow-practitioner ; to promise that your pills are not bitter or the knife will not hurt ; to promise that the chill or fever will not rise so high to-morrow ; to allow your patient to dictate methods of treatment or remedies ; to allow yourself to be agitated by the criticisms or praises of the patient's friends ; to allow yourself to buoy up the patient when the case is hopeless ; to allow yourself to make a display of your instruments ; to allow yourself to experiment or exhibit your skill uncalled for ; to allow yourself by look or action in a consultation to show that you are displeased, and that if you had been called first matters would have been different ; to allow yourself to indulge in intoxicating beverages ; to allow yourself to rely wholly upon the subjective symptoms for your diagnosis.—Ohio Medical Journal.

WOUNDS OF THE EYE, WITH REPORTS OF CASES.*

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Physicians are frequently called upon to treat what are commonly known as emergency cases, that is cases of bodily injury and sudden sickness from various causes. The management of these cases tries to the utmost a doctor's ingenuity, tact, coolness and ready self-adaptation to circumstances, and many a tyro in the profession has made a start, and gained a footing, by the manner in which he handled an emergency case. Within the past three months it has fallen to my lot to see and treat a rather unusual number of serious wounds of the eye, and I propose to write briefly of these and of one or two others that have occurred in my private practice. The text books, of course, have full and instructive chapters upon injuries of the eye, and illustrated cases are frequently cited, but usually they are the reports of brilliant and successful results which are not always the most instructive to the reader, who begins to think that his case was the only one of the kind that was ever lost.

Gun-shot wounds of the eye are not uncommon, and it seems strange how often one insignificant little pellet will select the eye as its target, while the rest of the face will escape injury. It depends of course upon what portion of the globe is struck, but unfortunately these injuries often result in loss of sight and frequently in loss of the ball. It seems, however, that certain cases may at times result more favorably than could have been anticipated. When the pellet remains in the eye the latter is invariably lost, although the former may lie encapsulated for many years without causing trouble. The point of entrance is also very important, for when the cornea is penetrated the lens almost invariably is wounded, which produces a traumatic cataract. The iris, too, may be injured by the same shot, and we see that by one little No. 8 or 9 shot an opacity may be made in the cornea, the iris wounded, traumatic cataract produced, the vitreous entered and rendered opaque, the tunics of the eye penetrated behind, or the optic nerve wounded. Shot wounds of the ciliary body are almost always followed by a loss of vision in the injured, and not infrequently the sound eye. However, such is not invariably the result, as will be seen later. When the shot penetrates the globe behind the ciliary body the chances for retaining some vision are better, unless the optic nerve is wounded. Even the cases that appear less seriously injured often result in loss of both vision and eye, because the inner coats—choroid and retina—have been torn and separated, and the vitreous humor rendered opaque by hemorrhage and floating bodies to such an extent that destructive inflammation frequently follows.

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* Read at the 45th annual meeting of the South Carolina Medical Association, at Columbia, S. C., April 26, 1895.

Case I. Mr. J. H., while out hunting birds with a friend, in January last, was accidently shot by the latter when only fifteen paces distant. Two pellets entered the right eye, one on each side of the cornea, and passed directly through the ciliary body. One pellet penetrated the left eye at the corneo-scleral juncion. He came to me three days later. The lids of both eyes were deeply ecchymosed, the discoloration extending from the edges in every direction to the margins of the orbits. Under the ocular conjunctiva was considerable extravasated blood and both irides were displaced towards the wounds. The right eye was entirely blind and the opthalmoscope showed the vitreous filled with clotted blood. With the left eye he could see objects (chairs, tables, etc.) by looking sidewise, that is, by turning the eye towards the nose, objects to the left could be indistinctly seen, which proved that the injury was more particularly to the temporal side as the pellet entered at the outer edge of the cornea. The lens was apparently uninjured. This was in many respects a perplexing case to treat. I judged that the pellets had passed entirely through both globes because of the extensive ecchymosis of the lids which would not have occurred had they remained in the globes and not penetrated the orbits from whence the extravasation of blood took place. The right eye had no vision, and was likely to prove a dangerous eye on account of the two wounds through the ciliary body, and it was therefore decided to remove it in order that it might not prove a menace to the left, which retained some vision, though its wound was also through the ciliary body. After removal it was found that the two pellets had passed through the ball and entered the orbit. Had both eyes been blind neither would have been removed because in that case it would have been impossible to predict which would eventually prove the better. I have recently examined a boy whose eye was shot through the ciliary body about three years ago. All traces of inflammation have disappeared, the iris is normal in appearance and movement, the vitreous is clear and in the fundus is seen a whitish spot where the shot probably passed out of the eye into the orbit. The eye has useful vision. We may therefore conclude, that shot-wounds of the eye are very serious, and generally cause loss of vision in the injured eye, especially when the cornea, iris, lens and ciliary body are injured; that loss of vision and sympathetic inflammation of the sound eye will eventually take place when the pellet remains in the eye, but that in many cases the pellet will pass entirely through the ball which may be surmised by the distance from which it was fired, the kind of powder used, the course of flight, and the extensive discoloration of the eye lids extending well up to the margins of the orbit. That when one eye only is injured it is better to watch it carefully and not to enucleate at once, because recovery with useful vision has taken place even when the pellet passed directly through the ciliary body. When both eyes are injured the more dangerous should be removed in order to give its fellow the best chance of recovery, but when both are blind neither should be removed until it can be definitely settled which is more likely to cause trouble. The gentleman above mentioned still retains some vision in the remaining eye and perhaps there has been a slight improvement.

Case 2. A lad of twelve years of age was hunting ducks with a companion about six weeks ago. They were on opposite banks of a river and the companion shot at the ducks on the water. One shot ricocheted and struck the right eye on the temporal side just below the insertion of the external rectus muscle, plowed up the external layers of the sclerotic but did not penetrate the globe. When seen three weeks later the eye was quiet, the cornea clear, the iris normal and externally nothing but a slightly elevated cicatrix marked the wound. The vision was considerably less than normal (15-CC). For better examination of the interior of the eye,the pupil was dilated by a drop of homatropin solution and the opthalmoscope revealed the following condition. Adjacent to the wound there were remains of retinal and choroidal hemorrhages and a considerable separation of the retina. A short distance back of this was a vertical rupture of the choroid, which seems rather an unusual occurrence from so small a missile (No. 4 shot). The optic nerve was paler than normal and spots of pigment were scattered about the fundus showing that the eye had been seriously disturbed by the blow. The prognosis in this case is rather favorable and vision will probably improve. The rupture of the choroid and separation of the retina being well forward will not interfere seriously with vision.

Wounds of the Sclerotic Coat when they do not involve other portions or the eye are not necessarily followed by serious results, but it is rare that the sclera is injured without the choroid and retina being implicated. As this is the external and protecting coat of the eye such wounds are dangerous in that poisonous germs may readily find their way into the eye-ball, hernia of the inner coats may take place, and finally, the vitreous humor may escape in such quantities as to cause a loss of the eye. The sclera is frequently wounded by fragments of steel and iron and ruptured by direct blows. Ruptures are more liable to occur in a line parallel to and near the cornea. When called upon to treat these injuries the first step should be to thoroughly cleanse the eye and its appendages with any aseptic solution,—boiled water with salt probably being that which is most readily obtained. Weak solutions of bichloride of mercury (1 in 2, 3, or 4000) may also be employed. Prolapsed vitreous and lacerated tags of retinal and choroidal coats should be cut off and the solution carefully injected to the mouth of the wound. The scleral and conjunctival coats must be preserved and the edges of the wound as accurately adapted as possible, The conjunctiva should be closely sutured over the scleral wound and the eye dressed antiseptically. It is always a good plan to keep the pupil dilated in these cases in order that any tendency to iritis may be averted.

Case 3. On the seventh of April, 1895, a porter of a drug establishment in Charleston was struck by a piece of glass bottle which had been broken by the explosion of a chemical. The left upper lid was cut from the inner to the outer canthus and the wound extended fully one inch beyond this point on the cheek. From the inner canthus to the middle of the lid the latter was divided entirely, and for a corresponding length the sclerotic coat was incised,—the wound extending from a point near the attachment of the internal rectus muscle diagonally up and back for three-fourths of an inch. Through the incision the choroid bulged and the iris prolapsed toward the opening. The eye was carefully cleansed and cocaine instilled. Five silk sutures closed the conjunctival wound over that in the sclera and the choroid was fairly replaced in position. The edges of the lid wound were next brought together and the eye dressed with iodoform, antiseptic gauze, cotton and bandage. Healing was rapid and without complication. The iris is still prolapsed and will remain so. The wound in the sclera, which is gradually narrowing, looks like a dark line through the conjunctiva. The vision is 15-CC, which will probably improve as the vitreous clears and the eye becomes quiet. When possible it is better not to introduce sutures into the scleral coat, but if necessary they should penetrate only the external layers. It may be asked why eserine was not employed to draw the iris back in place. Eserine is peculiarly liable to cause irritation in an inflamed eye and would by its action perhaps bring on iritis, which is to be avoided in all cases. In the above case a displaced iris is preferable to synechiæ and an occluded or secluded pupil.

Case 4. A penetrating wound of the eye to the inner side of the cornea and back of the ciliary body. A young man twenty years was struck by a small piece of steel as above described from the appearance of the wound (slightly gaping with protruding bead of vitreous) it was thought that the foreign body had entered the ball and ranged directly back, which would have brought it to the nasal side of the optic nerve. Some years ago I was successful in removing, by the aid of the electro-magnet, a piece of steel from the exact position in another eye which recovered with no damage to vision. In case four examination with the opthalmoscope showed the vitreous somewhat cloudy and there were no signs of the foreign body. The point of the electro-magnet was carefully introduced through the wound and swept gently through the vitreous but without finding the steel. It is probable that it did not enter the vitreous but fell out of the wound. The use of the magnet may be criticized because the presence of the foreign body was doubtful. It is a well known fact that particles of iron and steel can be removed from the vitreous chamber by the aid of the magnet immediately after they enter, but that the delay of even a few hours may frustrate all attempts. Great care should be taken in this class of cases to prevent the entrance of septic material to the wound which should be cleansed with a solution (1 in 1000) of bichloride of mercury. Prolapsed vitreous and protruding tags should be cut off.

Wounds of the Cornea, Iris, Ciliary Body and Lens. Wounds from the cornea alone are serious from the liability of leaving opacities that interfere with vision. When these wounds involve but the conjunctival layer vision will not be injured, but wherever the cornea proper is invaded an opacity results. In children these opacities absorb to a great extent, and perhaps entirely, unless the wound extends through to the anterior chamber. Perforation means escape of aqueous humor, and prolapse of the iris, which remains attached in this position. Wounds that involve the corneo-scleral junction may not leave opacities that will interfere with vision, but from another standpoint are far more dangerous from their proximity to the ciliary body, as will be shown by the following case.

Case 5. A little girl of five years of age stuck the point of a pair of scissors into the right eye, on the twenty-ninth of September, 1894. The wound was at the lower corneo-scleral border and from external appearances involved principally the cornea and iris as the latter prolapsed through. She was put under the influence of chloroform and the protruding iris cut off. The wound healed without trouble, the eye became quiet and she was discharged about one month later with vision good and media clear. One week ago her mother brought her to me saying, that the eyes had been giving trouble for about two months, but on account of the death of her husband and other troubles she had delayed bringing her. You may imagine my horror when I found the wounded eye had become inflamed, there had been iritis, followed by effusion of lymph into the pupil which caused its occlusion, and the lens and iris were pushed forward against the cornea; in other words there had been an irido-cyclitis. But this is not the worst, the sound eye had been sympathetically inflamed and was in a similar condition, though not as bad. The innocent looking corneal wound had extended into the ciliary body, poisonous germs were probably introduced and sympathetic ophthalmia, which is more apt to follow such injuries in children than in adults, was the sequel. I have advised enucleation of the exciting eye, it may save some vision in the other but the outlook is gloomy. Wounds of this region must be carefully watched even after all danger seems to have passed, and at the first symptom of irido-cyclitis the wounded eye should be excised before the other has become infected.

Case 6. J. E. B., white male, while working in the new post-office building in Charleston one month ago was struck in the right eye by the point of a rusty file which he was using in forcing apart some metallic plates. An angular shaped wound was made in the cornea, the angle being toward the nose and the sides extending above and below near the margins. The iris was almost entirely separated from its attachments, the lens was wounded and a quantity of vitreous humor escaped. The ball was sunken in appearance and it seemed at first sight that enucleation would be necessary. After thorough cleansing the appearance improved. The torn iris was removed, the anterior and posterior chambers (now one) were cleansed with a weak solution of bichloride of mercury, the edges of the corneal wound were brought in apposition and a bandage was applied. The next day the globe had regained its normal shape by the refilling of the anterior chamber and the large corneal flap was accurately in place and adherent. He continued to improve, though of course there was a great deal of inflammatory reaction. The man left last week for his home in Chicago and will, after the remains of the traumatic cataract have been absorbed, stand a fair chance of regaining some vision. Wounds of the cornea may be so small as to escape detection even by intelligent observers, unless the ophthalmoscope and oblique illumination by magnifying lenses are used.

Case 7. Mr. W. J. B., a patient of Dr. C. D. Clarkson, of Allendale, was chipping a mill stone in March, 1894, when he felt something strike him in the left eye. No trace of injury could be discovered by ordinary daylight examination, and the eye soon ceased to pain, but gradually became blind from the formation of a cataract. On the eighteenth of March, 1895, I removed the lens and found in the center a small piece of steel that had flown from the chisel used in chipping the stone.

Case 8. Mr. T. M. while hunting was struck in the right eye by a fragment of a percussion cap. The piece entered at the corneo-scleral junction down and out. When examined the next day a minute speck could be seen on the iris just behind the corneal wound. This was supposed by his physician and friends who examined the eye to be the piece of the cap, and so I thought, and almost told him that it would require but a slight operation for its removal. Before expressing an opinion he was examined by the aid of the ophthalmoscope, which at once proved the speck to be a small clot of blood from the wound in the iris. The lens, which heretofore had attracted no attention was found to be nearly opaque. In the lower segment of the lens a glistening particle of copper could be seen. Such a case as this tries the ingenuity and skill of the surgeon, and it is a mooted question whether it is not better to leave well enough alone. A foreign body in a lens is usually comparatively harmless to the rest of the eye, unless unusual swelling is caused, nor is there any immediate danger of it escaping from the capsule. However, no surgeon can feel satisfied in leaving an eye in a dangerous condition when a chance for its safety exists, and no man can rest easy so long as he knows a foreign body is in his eye which may eventually cause its loss. In fact, many persons would prefer an immediate attempt at its removal, and in case of failure, would readily agree to enucleation being performed. In this case the body could be seen, the lens was rapidly becoming opaque and my patient more nervous. I concluded to make the attempt at removal. My plan was to make an iridectomy in front of its position in the lens and then, if possible, to seize it with a pair of forceps. Persistent hemorrhage from the iris obscured everything, and it was impossible to carry out the plan, but as the corneal incision had been purposely made large enough for the extraction of the lens, this was accordingly done with the hope that the copper would escape with the lens matter. This failed also, as it remained with some of the cortical matter in the capsule. I now concluded to make no further attempts until the eye should become quiet, and in the meantime my patient has returned to his home. My course of procedure may again be criticised for attempting to remove the foreign body before the eye became quiet and the cataract mature.

Another attempt was made to remove the foreign body and this, too, was a failure. The eye was then enucleated and the piece of cap found in the anterior portion of the vitreous.

Case 9. Three years ago a gentleman was brought to me with a piece of steel in the lens similarly situated to the body above described, except that it protruded slightly into the anterior chamber. The iris partially covered the body and was attached to it. An iridectomy was done and was immediately followed by hemorrhage that obscured everything. The exact position of the body being known the point of the electro-magnet was introduced, when to my surprise the blood at once clotted. The chance for removal now seemed slight, but fortunately the clotting of the blood proved of inestimable value, for the hemorrhage ceased, and the clot was easily pushed aside. The magnet immediately attracted the steel from beneath the clot but failed to withdraw it, and it would slip off and glide under the clot again. This game of hide and seek continued for some time until finally it was grasped by the forceps and withdrawn. The eye was saved but the lens became opaque, as was expected.

Case 10. Mr. W. was brought by Dr. Josie, of Cypress, with the following history : A particle of steel from a chisel had flown into the left eye, penetrated the cornea between the center and outer margin and passing nearly through the iris impinged against or partially entered the lens. It remained in this position for a year, during which time there were several exacerbations of iritis, which of course left the iris adherent at that point. Ophthalmoscopic examination plainly showed the steel sticking in the iris midway between the pupil and periphery, and opaque striae were beginning to form in the lens. Vision was 15-XL. A small incision was made with a lance knife, near the foreign body, at the corneo-scleral junction. The point of the electro-magnet was entered and drew the steel from its resting place to the opening, from whence it was readily extracted by small forceps. The lens, if not actually wounded, had been disturbed, as was proved by the existence of the opaque radiating striae in its substance. Dr. Josie wrote me more than a year later that vision had improved, which goes to prove that in rare instances slight opacities in the lens when caused by traumatism maw be absorbed, or remain stationary, if the cause is removed.

Speaking of medical men advertising themselves through secular channels, the Medical Record says : " The old way is often criticised, and is not perfect. The man must become known through his works. The profession is not so dull but that it can recognize merit, and it estimates a man's abilities fairly well by his writings and by contact with him in scientific and social meetings. The recognition thus gained comes slowly, but special skill also is acquired slowly, and matters adjust themselves with a good degree of equity in the end." This is sound in theory, and we wish it were followed by the leaders in the medical profession. If it were it would be less difficult for the rank and file to observe the lines of equity. Personally we believe the doctrine certain to lead to the most successful medical career ; but here again the flash-light advertisers make such a glare that large numbers are dazzled by the rapid attainment of large business, and decide to " flash " themselves.—Am. Lancet.

UMBILICAL FREAKS: RATIONALE OF UMBILICAL DEPRESSION IN EARLY PREGNANCY.

BY THOS. R. EVANS, M.D.,
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It has been said that there is a specialist for every portion of the body except the navel. Now the writer disclaims any desire of filling a long felt want in this department, nor would he encourage a further multiplication of specialties, at least until several that afflict humanity are better learned.

He wishes to report two unusual cases, and then to call attention to the depression of the umbilicus as probably a reliable sign of early pregnancy, and particularly to the rationale of such depression. No mention is made of this subject in some of the text books, while in others no cause except pregnancy is given, and no rationale.

Case 1. A man thirty years of age was seized with such violent pain in the abdomen that he was compelled to sit and then to lie down to agonize. After some time he was able to walk to his home, and I was sent for. His face was pale, abdomen moderately tympanitic and stomach and intestines comparatively empty. His umbilicus was slightly pouting, but nothing unusual was observed about it. The case was treated as a case of intestinal colic, to use the old nomenclature. But there are more things in heaven and in earth than are dreamed of in our diagnoses. Upon visiting him the next day he presented me with apparently the quarter section of a skinned peanut, which had come out of his navel! Of course he thought it had worked through from the bowel. As his condition did not indicate such gravity, I reassured him, and with some mental misgivings I assured him that I would get the other half out and he would be relieved. With the round end of a probe insinuated in and turned around each fossa I turned out the other half. Unfortunately the pieces were lost before a critical examination was made.

The size, shape, cleavage and color, except that of the skin, which was white, was that of a peanut. The patient could give no history of this, to me, unparalleled case, unless he had put the peanut in his navel as a boy.

His theory of the causation of the acute pain was that he had drank some ale, which produced gas which pressed upon the foreign body. The umbilicus was somewhat inflamed after this denouement and discharged a small quantity of whitish fluid for several days. What was the nature of this intruder into the sacred precincts of the "omphalos"? Was it a peanut, or was it a concretion of soap, the epithelium of the part forming the husk or skin, the oblong form being moulded in the umbilical fossae and the facets by friction? The patient used a tub bath twice a week, and by lateral rubbing of the abdominal walls might have distended the parts, and the soap was probably of recent deposit. There was no hysterical deception in this case. We know that lint is frequently found in the umbilical depression in the form of balls or disks.

Case 2. I recently called the attention of a class in the University of Virginia to a young white man who virtually had no umbilicus. There was scarcely any depression, no button or corkscrewlike process, and the umbilicus was quite flush with the abdominal wall. To the sometimes miscalled laparotomist the preparatory toilet of such an aborted umbilicus would be easy, but to the obstetrician, had the case been that of a woman several months advanced in pregnancy, one of the guides as to its duration would have been absent. The umbilical areola is a very secondary sign of pregnancy, and after that condition has sufficiently advanced to cause a bulging of the umbilicus the diagnosis is usually sufficiently clear.

It is during the early months that diagnostic points are such desiderata. During the first two months of pregnancy the umbilical depression should be increased for the following reasons:

The uterus sinks into the pelvis, drawing down the bladder, which pulls on the cords which are inserted into the umbilicus. A sinker when let down must pull on the hand. With the reader's permission to refresh his anatomy: The anterior neck of the uterus and the anterior vaginal wall are attached to the base of the bladder. The bladder is connected with the umbilicus by the urachus, the superior false ligament, and with what may be termed the two hypogastric ligaments. May not this tug-of-war-like antagonism account for some of the vesical irritability of early pregnancy? In women the umbilicus is naturally larger and deeper than in most men. But in the early days of pregnancy particularly in primaparae, does it not become unduly large and deep and almost suggest the marsupial? The tonus of the abdominal wall in primaparae notably depresses the uterus, and the gas, which is peculiarly apt to be generated in early pregnancy, may also assist in such depression, therefore, it would seem that in early pregnancy there is a threefold cause for depression of the umbilicus.

SELECTIONS.

APHORISMS RELATING TO OBSTETRICS.

What to do and what not to do in the management of labor, that is the question.

No branch of a physician's practice requires more self-poise, and where so many complications arise, commanding our sympathy and demanding our skill, as that of obstetrics, and when disease and death follow a normal case of labor, the cause can be traced to none other than to ignorance or mismanagement.

With these preliminary remarks, Ewing advances a few aphorisms relating to obstetrics.

1. Examine the urine a week or so before the expected confinement. Albumin need not cause alarm, unless present in large quantity, in which case the woman should be restricted to milk diet, given 1-10 grain of sulphate sparteine four times a day, and the bowels kept open with cream of tartar, the object being of course to relieve congestion of the renal veins.

2. Make no digital examination without first cleansing the hands and nails, together with the external genitals, with a solution of bichloride of mercury (1 to 2,000) and ethereal soap.

3. Empty the rectum thoroughly with an injection of warm water.

4. Make as few examinations as possible during progress of labor, and each time dip the hand first in antiseptic solution.

5. If presenting part emerges slowly from the womb, do not allow your impatience to so get the better of your judgment as to induce you to "assist nature" by pulling upon the os. Probably all the deep pathological tears, calling for surgical interference, found on the right and upper anterior sides of the cervix, are caused by the finger of the accoucheur.

6. If pains are sluggish, change the position of the patient.

7. Do not rupture the "bag of waters" too soon, as it, when intact, favors the posterior rotation of the face.

8. Should a posterior rotation of the occiput occur, and nature fail after a reasonable length of time to effect a delivery, apply the forceps and turn the occiput to the front by rotating either to the right or left, as the position of the babe would indicate. This manœuvre of the forceps can be executed without danger if care be exercised, turning the head

not more than a quarter of a circle at a time, then pausing a moment for the shoulders to follow. After this is accomplished the instruments should be removed and reapplied.

9. In making traction on the child's head with the forceps, unlock them about every thirty seconds, else the engorgement produced by continued pressure of the instruments might cause a hæmatonia of the brain or dura.

10. To prevent a rupture of the perineum.

When the occupant is emerging from the vulva, remove the right hand from the forceps and with it support the soft parts, while with the left you continue slight traction upward until the bridge of the nose reaches the anterior border of the perineum, when the instruments are quickly removed. Now, in order to avoid a rupture, especially if an expulsive effort is being made, hold the head in statu quo until a relaxation takes place ; then with the thumb and first two fingers of the right hand, push the perineum down and under the chin, allowing it to rest on the palmar surface of the fingers. The next pain will expel the head, which is grasped by both hands and pulled upward, delivering the under shoulder first.

11. Should a rupture occur, repair the injury at once, using the large iron-dyed silk.

12. Do not become impatient if the placenta does not follow quickly, but wait, say a half or even an hour, before an attempted forcible delivery is made. Should, however, a violent hemorrhage occur, empty the uterus at once, by disinfecting the hand, introducing it into the womb, detaching the placenta, and allowing it and the hand to be forced out together.

13. The source of uterine hemorrhage following labor arises almost always from the open and now no longer useful utero-placental vessels. Nature, ninety-nine times out of a hundred, prevents hemorrhage arising from this source by filling up these tortuous vessels and plastering over their mouths with coagulated blood. Therefore,

14. Do not use Créde's method, and for two reasons : First, that the act of squeezing out the placenta dislodges at the same time from the anfractuosities and vessels this plastic coagulum, inviting streamlets of blood to follow the non-pressure of the hand, causing in all probability a hemorrhage instead of preventing it. The second reason is, that a hemorrhage following after this method of forcible expulsion, necessitating, as it usually does, a constant hand pressure over the uterus for half an hour or more, while it may not prevent absolutely the reformation of nature's cement, would cause paralysis of the contractile fibres of the womb, rendering them incapable of responding to the stimulus of ergot or to anything else.

15. For these passive hemorrhages, where so soon as the hand is removed the hemorrhage goes on, the writer relies on 1 teaspoonful of laudanum rather than 2 or 3 of ergot.

16. After the birth of the child, gently knead the abdomen with the finger tips of the left hand, using barely force enough to feel the uterus beneath. This gentle friction excites uterine contraction far better than rough massage, expelling the placenta almost as quickly and is rarely, if ever, followed by unpleasant hemorrhages or after-pains. This slight finger pressure should be continued a short time after the placenta is expelled.

17. In early abortions, before atrophy of the blood-vessels of the mucosa takes place, the hemorrhage comes greatly from this engorged mucous membrane instead of entirely from the placental surface, as in full term. To stop it, do not use ergot or compression, but approximate the inner surfaces by removing the decidua with the placental forceps the dull curette. This is to be followed by a hot antiseptic (preferably carbolic acid) intrauterine douche.

18. Have the vulva kept well covered with sublimated cotton to catch the lochia and prevent infection ; and, in addition, if a clean and competent nurse is in attendance, order given night and morning for five days, warm antiseptic vaginal douches.

19. Wash the babe's eyes the moment it is born, and in dressing the navel use borated cotton saturated with glycerin.

20. Restrict the diet the first three days only, after which have the bowels moved either by enema or the compound licorice powder. (If there is much flatus, use instead a full dose of castor oil and turpentine.)

21. Keep the woman in bed two weeks, if possible, and the first four days give a capsule containing ½ grain of ergotin and 2½ grains of quinine, morning, noon and night. This tends to prevent fever and hastens the process of involution.

22. If surgery is your specialty, and you are called to a case of confinement, use extra precautions in cleansing the hands and nails ; in fact, it would be wise, if your practice in surgery is extensive, to let obstetrics alone.—Ewing, in Medical Record.

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AUTO-INTOXICATION.

The tendency in medicine to-day is to study the origin of disease. We are not satisfied, neither should we be, to classify symptoms, give them, collectively, a name and consider our work done.

A physician who works in this manner should retire from the profession at once, as he is not capable of appreciating the responsibilities of his work.

As Bouchard says, the causes of diseases may be many, but the processes following those which produce disease can be relegated to four types. These four chief pathogenic processes are: first, primary elementary dystrophies ; second, nerve reactions ; third, disturbances antecedent to nutrition ; fourth, infection. In attempting to place before you in a concise manner these thoughts upon auto-intoxication I will have occasion to refer to the process of disturbances antecedent to nutrition, because this, in my opinion, is the most important factor in the development of chronic diseases, and one that should not be overlooked when attempting to prevent the development of the acute.

To understand the antecedent disturbances we must first be acquainted with the process which takes place in all healthy tissue, and which we term metabolism. For the purpose of illustration we may take the instance of a muscle of definite structure ; it enjoys a free supply of blood and displays, during contraction, energy, heat and sound. It produces certain chemical substances, carbonic acid, water, etc. The blood becomes venous, i. e., loses oxygen and certain elements that supply nutrition to the tissue. The character of the changes that take place in the muscle will depend largely upon the material supplied to the tissues of that muscle. Thus the protoplasm acts on and alters the lymph, and the lymph acts on and alters the protoplasm, this constituting the vital process, the life of tissues, so that it is apparent that the healthy activity of the tissue will depend upon the kind of material supplied. In considering the metabolic changes in the tissues, we must always remember that if the waste material be carried from the tissues by the blood, these products of cell activity must be eliminated by the emunctories, that the blood may be relieved of its load of waste in order that it may carry again to the tissues the material prepared for their nutrition and the oxygen that must be incorporated in order to have healthy cell activity.

Now we can see how much we must depend upon the emunctories to relieve the system of the poison produced in the metabolism of tissues, and in order that their functions are properly performed, it is necessary that the blood, circulatory apparatus and nervous system be in good condition. So here we are again liable to have a double reaction, the emunctories failing to act properly if either the blood, nervous system or circulatory apparatus become disordered, or the emunctories fail to functionate properly. That the primary cause of disturbances in metabolism may be looked for from two sources, i. e., the product supplied by the blood for pabulum and the oxygen, admits of no dispute. If the plasma takes to the tissues a supply that is over-rich in various constituents, that contains poisons that have not been eliminated by the emunctories, or that is deficient in nutritive principles, or if the supply of oxygen is insufficient from any cause, the tissues will not be capable of performing their metabolic changes in a proper manner. We will look for causes of interference with metabolism which originate in the intestinal tract. For instance, we have a patient, as all have had, who presents himself for treatment and complains of feeling much depressed in the morning upon awakening, slight headache, probably has slept poorly, is dizzy upon attempting to rise from bed, possibly almost falls while washing his face, is very sensitive to slight changes in the temperature—in other words, takes cold easily, disturbances of vision, and possibly contraction of hands, as pointed out by Kussmaul, Beaumetz and others. In this case we examine the stomach carefully and find that there is dilatation; there is also eructation produced that may become fetid, still, owing to the inactivity of the muscular coat of the stomach, eructations are not always present. Regurgitation with acid odors may take place. This is positive evidence that there is fermentation in the stomach. The feces are generally acid and peculiarly offensive ; and upon careful inquiry we may find that although the operations are soluble there is a feeling that the act is incompletely performed, and there is likely to be burning about the anus. In such a case we will find congestion of the liver, because the organ has attempted to prevent the poisons generated in the intestinal canal from getting into the general circulation. The metabolism in the liver becomes weakened, and eventually the organ becomes indolent and allows the poison to enter the general circulation and we have, as a result, auto-intoxication.

Again, we have the nervous system exposed to a shock; there is a disturbance in the circulation ; the cutaneous vessels are contracted, and there is an increased amount of blood in the central organs ; the great regulating apparatus, the kidney, does not respond ; the equilibrium is not re-established and, as a result, we have possibly a catarrhal condition of the common bile duct which interferes with the outflow of bile. There is also supposition of the part taken by the liver in disassimilation, and waste products that should be eliminated are reabsorbed and the result is auto-intoxication which would be of much more frequent occurrence if it were not for the permeability of the kidneys. In this we have a common menace to the entire economy, for the irritating products which escape by the kidney are likely to irritate that organ to such an extent that it may fail to eliminate the poisons that have been absorbed from the liver. Therefore it is the duty of every physician to watch and investigate these important emunctories, and every care should be taken to relieve them of the injurious effects of the elimination of these poisons by diluting them as much as possible.

In diseases of the air passages auto-intoxication is so palpable to everyone that we need hardly dwell upon the subject. The accumulation of carbonic acid and other waste products in the system, which should be eliminated by the lungs, is one reason why these diseases are often so difficult to manage and why pneumonia, for instance, is such a fatal disease, the gravity of disease increasing in proportion to the amount of eliminating lung tissue involved ; in other words, the death of the patient from pneumonia is caused by auto-intoxication.

In concluding, I repeat, that in those cases of serious impairment of the metabolic changes in the tissues ; where oxidation is incomplete ; where the nervous system is unstable ; the circulatory apparatus is defective ; the kidneys, lungs, skin, bowels or the liver are being overworked, either from the products of dis-assimilation or mal-assimilation, and in spite of those cases where one or more of the emunctories are defective in themselves, consider the possibility and the probability of auto-intoxication.

Remember again, that from these causes the primary disturbances antedating the nutrition of every form of tissue in the body originates, that in these disturbances we often find the commencement of not only such diseases as Bright's disease of the kidney, diabetes, acute yellow atrophy of the liver, but that carcinoma, sarcoma, etc., may have their origin from the same cause. And, last but not least, it is the duty of the physician of to-day to guard against the accumulation in the system of such products as poison the tissue, such as cause auto-intoxication, and in this way disturb the general nutrition.—Dr. J. R. Lemon, in Med. and Drug Reporter.

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ABSTRACTS.

Diabetes.

Unschuld (Berl. klin. Woch.) draws attention to some of the less noticed symptoms in early diabetes. He quotes a number of illustrative cases in which the disease was masked by the presence of dyspeptic symptoms, nervous symptoms classed as neurasthenia, etc. Sometimes diabetes may quite accidentally be discovered. Here marked thirst and abundant urine were mostly absent. Frequently cramp in the calves is complained of, a symptom at present but little recognized. During the past eight years the author has found it in as many as twenty-six per cent. of his cases. In 1895 he found it 33 times among 109 cases. It most often occurs in the morning, but sometimes at night. If such cramps occur and the patient complains of weariness and weakness, the urine should at once be examined for sugar. These cramps may be present in all forms of diabetes, except in the acute disease occurring in young subjects. Massage and attempts at walking generally relieve the cramp. The cause is obscure ; perhaps it is due to the diabetic toxins. The recognition of cramps may lead to the early diagnosis of diabetes.—British Med. Jour.

Quinine in Chorea.

The author reports in the Boston Med. Journal eight cases of chorea, which he treated with quinine alone, which he administered in doses ranging from six grains to eighteen grains a day. No other medicine was given, but hygienic measures were also observed. In one case there was complete recovery in a week after treatment was begun, but, although this was rather a short time, it is not very remarkable for chorea to recover in that period. The third recovered after being under treatment ten weeks. In five cases the quinine treatment proved ineffectual, and arsenic was substituted, with distinct benefit in the majority of cases. With the exception of one case which recovered in a week, the results are neither remarkable nor satisfactory. The theory upon which quinine is advised in treating chorea, the author believes is not correct. Comparatively few cases have thus been treated and the results carefully observed. Those results on the whole do not warrant us in ascribing to the drug particular virtues. The good accomplished by quinine undoubtedly is due to its tonic properties, or possibly to some influence which it exercises over the toxine of the disease. The hypothesis does not seem tenable that it acts by stimulating the inhibitory motor actions of the spinal cord.—Archives of Pediatrics.

Treatment of Contusions and Lacerations of the Urethra.

Dr. Reineking formulates the treatment as follows :

1. Make careful attempts to introduce a soft catheter, and if successful, leave it in place for five or six days, irrigating the bladder daily with boric acid solution. After that time the re-introduction, if necessary, will generally be easy.

2. Avoid metallic or other stiff instruments ; this will also do away with the necessity of general anæsthesia for purposes of catheterization.

3. When a soft catheter cannot be introduced, an external urethrotomy should be performed. It should be done at the earliest possible time, so as to avoid the extravasation of urine and infection of the peri-urethral tissues.

4. If for any reason a urethrotomy cannot be done, we have in supra-pubic puncture a safe, efficient and easily executed procedure for purposes of temporary or even permanent relief.

5. As a substitute for puncture, supra-pubic cystotomy may be resorted to.—Milwaukee Med. Jour.

Choice of Operation in Stone of the Bladder.

In cases where all the cutting operations are equally practical, Dr. W. H. Hingston (Medical Record), prefers the lateral method, and offers the following principles :

1. Lithotresis (and by lithotrity I mean that more perfect method which was foreshadowed by Mercier, in France, and brought to its highest perfection in America) in all cases of adults where the stone is neither too large nor too hard for the lithotrite.

2. Lithotresis where the urethra is, or can be made sufficiently capacious for the crushing instrument.

3. Lithotresis in children, however young, where the urethra can permit the passage of a crushing instrument..

4. In very young children the cutting operation is preferable ; the precise age at which lithotrity is possible must vary with the calibre of the canal, which in young children greatly varies in its capaciousness and in its capacity ; when the urethra in the child is not and cannot be made to fit the lithotrite, the cutting operation to be chosen is the lateral method.

5. In cases of stone in the aged, where enlarged prostate not only prevents the stone being seized, but its dimensions from being ascertained, we should act as if the calculus were of large size and incapable of reduction, and proceed to operate by the supra-pubic method.

HYGIENE.

Contagious and Infectious Diseases.—General Rules for their Restriction and Control.

Definition.—A contagious disease is one that is communicable directly from the sick to the healthy, or otherwise from some contaminated source, by means of a virulent agent, known under the general term of contagium. It has been demonstrated that the contagium. i. e., the special cause of disease, is a living organism.

Of the various communicable maladies, diphtheria, scarlet fever, small-pox and measles may be classed as eminently contagious. Others, as Asiatic cholera. typhoid fever, typhus, yellow fever, are infectious, and their communicability is not direct from the sick, although it is as positive from the germs.

Tuberculosis (consumption) is also communicable, and as far as possible should be dealt with accordingly.

Modes of Transmission.—For practical purposes, the modes by which contagious and infectious maladies spread are as follows: For diphtheria, scarlet fever, smallpox, measles, the contagium is transmitted by contact with the emanations, exhalations, discharges, etc., from the patients wherever and whatever these principles may be. Clothing, bedding, carpets, furniture, dishes, and various parts of the room may harbor or carry the foe. The contagium may also spread through the medium of air, dust, water, milk, food, etc. The careless physician, nurse, attendant visitor and the convalescent may also carry and spread the dangerous elements. Contagium (or germ) of cholera, typhoid fever, typhus, and like infections exists chiefly in the discharges of the patients, and may contaminate water, milk and other food supplies; in certain conditions it may even be transferred on clothing and cloths; it may be transmitted from animal to man by means of infected milk or meat. As to consumption, its chief medium of dissemination is the spittle of consumptives. In people suffering from pulmonary tuberculosis the expectoration is at times full of germs. If this discharge is allowed to fall on the floor, carpets, etc., of the houses, churches, schools, theatres, etc., or on the sidewalks, where it will dry, the germs are afterwards caused to rise in the air with the dust either by the use of the broom or otherwise, and all the people exposed must inhale the contaminated air. Under such influence the susceptible becomes infected.

How to Avoid the Contagium or Special Cause of the Disease.—Do not take the breath of one sick. Unless you are needed to care for the sick, or are protected by having had the disease, or in the case of smallpox by thorough vaccination, do not go near the sick person. Do not wear any clothing the sick person has worn, during, just before, or just after his sickness, until after scalding and disinfection. Keep your hands free from discharges from the body or skin of the sick person. Do not touch him with sore or scratched hands. Particularly avoid inhaling or in any way receiving into the mouth or nose the branny scales that fall off or pell off from one recovering from, or apparently wholly recovered from scarlet fever.

Practice special personal cleanliness, consisting of frequent wash baths, irrigation of the mouth and gargling of the throat twice a day; cleaning of the head, finger nails, etc. A palatable, effective, non-poisonous antiseptic mouth-wash and gargle for daily use may be made with citric acid, oil of cinnamon and eucalyptus, each of which are good disinfectants, particularly for the germs of diphtheria, typhoid fever, consumption and cholera. By thus keeping the mouth disinfected, the danger of infection of the throat by diphtheria or consumption germs, or of the alimentary canal by germs of typhoid fever, cholera, etc., are much limited.

How to Restrict the Contagium or Special Cause of the Disease.—Isolate the patient preferably in a room on the upper floor, from which, if possible, carpets, curtains, stuffed furniture, and all the other articles not required for immediate use, should have been removed beforehand. This should be done even in mild cases of the disease classed in the foregoing as eminently contagious. The wants of a patient suffering from such a malady should be attended to by adults, preferably those protected by proper vaccination or by having had the disease. Children and those not thus protected and not essentially needed as nurse or attendant to care for, feed and comfort the patient should be kept away. Consumptives or those exposed to diphtheria should gargle their mouth two or three times a day with such an antiseptic mouth-wash as mentioned above, and spit in spit-cups containing a copperas solution, as explained farther in this circular.

No one should go from the sick room where an eminently contagious disease exists to a child or other unprotected person until after a change of clothing, a thorough washing of the hands, face, hair and beard. Always wash the hands thoroughly after the necessary handling of the sick person or of anything that has been in contact with the sick. Keep those who have been exposed to any of these diseases away from schools, churches or other assemblies, and from all children until it is known whether they are infected ; and if they are found to be infected, isolate them until after complete recovery and thorough disinfection.

Cleansing and Disinfection in the Sick Room. — Open the windows as much and as often as possible to produce thorough ventilation, taking care to protect the sick and all who attend them. It is very useful to keep a fire night and day in an open fire place. Keep in the room a tub containing a quarter of a pound of sulphate of zinc and two ounces of common salt to each gallon of water. All bed linen, towels, clothing, etc., used about the patient should be placed to soak in this solution at least an hour before removing from the room, and should then be thoroughly boiled separate from the family washing. Never send such articles to the public laundry. All dishes, knives, forks, spoons and instruments that such a solution will not injure should likewise be immersed before removal ; the others should be scalded in the sick room. Afterwards all such articles should be taken out and washed in scalding water. The spit-cups and chamber-vessels used by the patient should be drenched before they are removed with the same disinfecting fluid, but three times as strong, or in a solution of copperas made by dissolving one and a half pounds of copperas in a gallon of water. The safest way is to always keep some of this solution in the spit-cups and vessels.

How to Destroy the Contagium or Special Cause of the Disease.—(a.) Thoroughly disinfect or destroy whatever is removed from the person sick, or from the sick room. In cities, throw all discharges from the patient received or mixed into vessels with a strong solution of copperas, as stated, into the watercloset; elsewhere they should be buried at least 100 feet distant from any well; or where this is impracticable, they should be received on old cloths, which should immediately be burned or disinfected and buried.

(b.) Thoroughly disinfect the sick room and its contents after removal of the sick person, whether by death or recovery.

Disinfect as follows: Burn whatever has been in contact with the sick person and is not too valuable to burn. Garments, sheets, blankets, etc., that will not be injured by bleaching should be boiled for half an hour in a zinc solution, as mentioned in the foregoing, made by dissolving zinc sulphate and common salt in water, in the proportion of four ounces of zinc sulphate and two ounces of common salt to one gallon of water: or at least they should be boiled in water one hour after immersion in this solution as stated. Hang up and loosely spread out clothing, bedding, etc., that cannot be boiled; or spread it loosely over chairs in the sick room, leaving the bedstead and other furniture in the room. Close all openings to the room very tight. For a room ten feet square place in the center two pounds of sulphur in an iron pot or pan supported on bricks. Set the sulphur on fire with live coals, or with a spoonful of alcohol lighted by a match. Be careful not to breathe the sulphurous fumes. Leave the room tightly closed for twelve hours, then air it thoroughly. For a large room use a proportionately larger quantity of sulphur, at the rate of two pounds for each 1,000 cubic feet of air-space; and try to burn as much as possible of the sulphur used, and in more than one place, so that every spot and corner is reached by the fumes. It is preferable to repeat this fumigation.

Keep your house and premises and everything connected therewith clean, but remember that the contagium of diseases may attach to the cleanest article of clothing, food, drink, books or papers if it is exposed thereto.

When the death of a person who has died from scarlet fever, diphtheria, or small-pox, cholera, or yellow fever, is announced in print, the notice should state the cause, as: "from scarlet fever," "diphtheria," or "small-pox," "cholera," or "yellow fever," as the case may be, to prevent attendance at the funeral or visits to the house by persons liable to take the disease.—Missouri Sanitarian.

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It is said that the average length of life of the New Orleans negro is only 24.2 years. This frightful mortality is also ascribed to the lack of medical attendance and the wretched sanitary conditions in which the colored population of large Southern cities live. It is asserted that probably not one-half of the negroes receive any medical attention during illness. Here is certainly a field for home missionary work. If the foregoing assertions are to any great extent true, it is a disgrace to our civilization and to our common humanity. Forty million dollars have been given since the war toward the literary education of the colored race, but how much more pressing is the problem of their medical care and sanitation ! It may be doubted if forty cents have been given toward the education of negro physicians. Much has been done in educating foreign medical missionaries ; why not do the more needed duty of medically educating young colored men, thus avoiding a crying public disgrace by enabling them to work among their suffering brethren ?—Med. News.

THERAPEUTICS.

The Treatment of Gout.

Discussing this illy understood subject before the New York Academy of Medicine, Dr. F. T. Kinnicutt (Daily Lancet) said that he thought the neuro-humeral theory was the best of any that had been presented, and he also thought that there was more to be looked for than chemical causes. The neurotic symptoms were prominent, and often there was an exaltation of spirit preceding an attack of gout. He had employed piperazine and found it quite useful. He had obtained good results from its use in cases of mild pyelitis in the presence of small calculi or irritation. There seemed no doubt that these cases in which he had used it were cases of myelitis, for they presented all the clinical signs. He therefore believed that piperazine had a distinct value in therapeutics. He remembered two children of gouty parents, who had pyelitis which yielded to this medicine. He believed that gout existed in America to-day to a very large extent, but perhaps more often in the irregular form than in the typical forms. He thought that it was not seen so very much in the hospitals, and so one might be led to think it was a disease that was not at all common, but it was very commonly found in private practice. He had found it most in women who were approaching the climacteric period. An excellent method of administering piperazine are the tablets. Each of these tablets contains fifteen grains of chemically pure piperazine-bayer, which is an average daily dose of the remedy. Dissolve one tablet in about a pint of water and take in three equal proportions during the day.

The Treatment of Itching.

Dr. Edward B. Bronson (Medical Record) describes at some length the means that may be employed to remove this distressing affection, and groups them as follows:

Measures to Remove Local Excitants. — These will include, first of all, such as directly tend to prevent scratching. Irritating contacts of all sorts should be most scrupulously avoided. Attention should be given to the underclothing. Woollen is almost never tolerated. The clothing next the skin should be of the softest material —cotton, linen, or possibly silk. Of further importance is the avoidance of immoderate temperatures, whether of heat or cold, and especially of sudden changes, which are peculiarly apt to excite itching. The local excitants may not only be extracutaneous, but also intracutaneous. Often they are incidental to the trophic changes of one of the so-called pruriginous diseases, in which case the treatment of the pruritus is included in that of the disease of which the itching is a symptom. When they arise from the toxic materials conveyed to the skin by the blood, the endeavor is to eliminate these materials by depurative remedies, more especially diaphoretics and diuretics. These measures failing or proving insufficient to secure the desired rest, it becomes necessary to have recourse to certain sedatives.

Sedatives.—Used internally, these are apt to be disappointing. The degree of general sedation that is required to affect the nerves of the skin, in so intense a disturbance as pruritus often is, affords a sufficient reason why this method of treatment is usually objectionable. Further than this, the depressing and atonic after-effect on the nervous system tends to exaggerate the general hyperæsthesia, which is already essentially an atonic condition, and thereby increases the tendency to itching. Especially objectionable on this score are most of the narcotic sedatives. The bromides, on the other hand, are often indispensable, and may be required in liberal doses. To avoid the enervating effects of the loss of sleep, sulphonal or some other hypnotic is occasionally needed. In connection with this class, two internal remedies, namely, cannabis indica and gelsemium, are worthy of mention. The latter has proved of benefit in some cases, more especially according to the writer's experience in protracted cases of urticaria, but the doses required are so large as to forbid their long continuance. Finally, the antipyretics, phenacetin and antipyrin, have some effect upon pruritus, though less than upon the sensation of pain. The local sedatives used in this disease are generally far more satisfactory in their effects than the remedies just considered, especially where the disease is limited in extent. They are for the most part agents that tend to retard vital action. The fact that many of them are antiseptics probably implies something more than mere accidental coincidence. Typical among the remedies of this class is the group which includes carbolic acid, salicylic acid, salol and thymol, all antiseptics, and all having undoubted virtues as antipruritics. Carbolic acid is, perhaps, all considered, the most reliable and most generally useful antipruritic. It is preferably employed in oils or ointment. The following has been largely employed by the writer:

℞	Acid carbolic	ʒ i-ij	
	Liq. potass	ʒ i	
	Ol. lini	ʒ j	M.

Sig.—Shake before using.

Salicylic acid and salol, though less energetic in their effects, act similarly to carbolic acid. They may be used in combination with other drugs, or by themselves in oils or ointments, or sometimes alcohol, and also in superfatted soaps. Thymol is also useful in certain cases, but, on account of its irritating effect, cannot be used when the skin is very sensitive. Corrosive chloride of mercury also has a reputation as an antipruritic. Cocaine has proved disappointing for two reasons: first, because of the difficulty of making its action felt through the intact epidermis; and, second, for the reason that any tissue, when long or frequently subjected to its action, suffered a certain atony and enervation that seems to render it more predisposed after than before to the irritation or irritability the drug was intended to alleviate. These objections by no means preclude its use entirely. It is often resorted to with most satisfactory results in localized forms about the mucous orifices, upon raw or abraded surfaces, and sometimes with appreciable effect even where the epidermis is apparently intact. Hot water, to be effective, should be over 100° F., and the applications should be prolonged for several minutes.

Sensory Stimulants.—Electricity, whether in the form of galvanism or faradism, has sometimes proved of decided benefit. Strychnia, in those cases of pruritus which may be called atonic, is a remedy of value.

Substitutive Irritants.—One of the best palliatives of itching is menthol, together with the peppermint preparations generally. Menthol relieves itching as it relieves pain, not by direct inhibitory action on the molecular movements of the sensory nerves, but chiefly, if not solely, as the writer believes, by substituting an exaggerated temperature sense for the perturbed sense of contact, or for the sensation of pain. It is usually employed in alcoholic solutions (grs. v-x to ℥ i), and may be used in ointment. It is also with advantage combined with salol or thymol.

Alteratives of Cutaneous Nutrition.—They include not only absorbent and anti-catarrhal remedies to remove the products and curtail the processes of incidental inflammations which may act as contributory causes of the itching, but such agents as tend to control blood-supply and overcome hyperæmia. In this way act diaphoretics, and possibly diuretics, as well as by their substitutive and eliminative or depurative action. Thus it is probable that jaborandi, which is recommended by so many writers, acts in all three ways. This drug is especially useful when the skin is hot and dry, and where it has become the depot of noxious materials deposited from the blood, as, for example, in the itching of icterus. The local remedies belonging to this class include certain resinous or tarry substances. Such are ichthyol (five to ten per cent.), occasionally tar, resorcin (three per cent.), and benzoic acid or benzoin. Hydrogen peroxide has also proved beneficial.

Motor Depressants.—Among the internal remedies already mentioned, gelsemium and jaborandi belong to this class. Another remedy, more especially recommended in urticaria, is atropia. The good effect of this drug in urticaria, when used in full doses, such as are always required to produce this effect (from one-hundred-and-fiftieth of a grain upward is probably due to its secondary action; in this action the muscles relax and the vessels are dilated. Hot-water applications take the first place in local remedies belonging to this class. Here, also, may perhaps be included such local sedatives as hydro-cyanic acid, cyanide of potassium, corrium juice, tincture of arnica and chloroform.—Boston Med. and Surg. Jour.

Treatment of Diphtheria.

Dr. White, after reporting a series of cases treated at the Willard Parker Hospital, draws the following conclusions:

1. That frequent washing of the air-passages attacked by diphtheria lessens the duration and amount of diphtheretic membrane.

2. The addition of antiseptics, in sufficient strength to be germicidal, to the irrigating fluid is irritating to the mucous membrane, thereby causing extension and persistence of false membrane rather than the effect desired.

3. The addition of antiseptics to the irrigating fluid is liable to cause system poisoning and disagreeable complications from the swallowing and absorption of some of the fluid used,—e.g., the two bichloride cases cited above.

4. Spraying the throat (also the pernicious treatment of swabbing), whatever solution is used, can have no good effect, as the parts reached by the spray must necessarily be very limited, excepting, possibly, in the hands of an expert. Furthermore, the spray cannot be used with young children, as anyone can testify who has tried it. This is especially true of some solutions where it is necessary to use a glass syringe.

5. Frequent cleansing of the throat and nasal cavities with a bland solution, such as plain warm water or normal salt solution, is easier of application, is more agreeable to the patient, and does all that any antiseptic solution can accomplish, either upon duration of the membrane or the period of isolation.

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SOLD BY LEADING DRUGGISTS.

A very thorough and strictly scientific investigation of the results of this treatment has been made during the past year by the Christian Advocate of New York. The editor of this journal, Dr. J. M. Buckley, is recognized as one of the best authorities in this country on popular delusions and allied subjects. The statement has been largely circulated that only five per cent. of the graduates of Keeley institutes relapse. The investigation instituted by Dr. Buckley was designed to prove the truth or falsehood of this statement. Upon the announcement of the design both the editor and publishers received long and not very courteous letters from the Keeley Company denouncing their methods of investigation. One of these contained the impudent claim so frequently made by Dr. Keeley that he is the discoverer that inebriety is a disease. This needs no denial by the intelligent physician. That there are diseased conditions resulting from drink, and that there are certain diseased conditions which induce it, every doctor admits, but he does not admit that every man who drinks does so because he is diseased. It is a pernicious doctrine and has already done much harm as it has been disseminated by Dr. Keeley. It makes a man who drinks simply out of viciousness feel himself, or at least fall back on the argument, that he is a poor sufferer from a disease and cannot help himself ; instead of regarding himself as a sinner who ought not to drink and who might help it if he would. Drunkenness is more frequently a vice than a disease.

Dr. Buckley says that having been interested for many years in the reformation of drunkards, he has preserved everything relating to the subject. About thirteen years ago Dr. Keeley sent him a circular, offering for $9 to cure drunkenness by two bottles of medicine. This medicine had then been used for five years, and Dr. Keeley expressed his "fullest confidence in its merits," and felt no hesitation in guaranteeing it as "an infallible cure for drunkenness." Dr. Keeley at that time advertised another medicine guaranteed to cure another disease. Dr. Buckley then concludes, very reasonably it seems to us, that if Dr. Keeley had never known a failure from the use of the two bottles at $9 to effect a permanent cure for drunkenness, there was no necessity for establishing a new system which requires men to leave home and business, to go to a distance and pay the advanced price of $25 a week for three or four weeks' treatment at one of the cures, to sell state rights throughout the country at the rate of $23,000 for a state of moderate size, furnishing all the medicine and getting forty per cent. on all used at each institute.

The keeping of the formulas secret is a most serious objection to the use of the Keeley remedies. It increases greatly the cost of the treatment, and prevents any scientific investigation as to the value of the remedies, it being impossible to separate the effect of the remedy from the mental and moral influences of the treatment. As the Advocate justly says: "the reason given for keeping it secret are such as cannot commend itself to sound judgment and philanthropic motives. The notion that Dr. Keeley has something that the medical profession of the world, which has made such strides within the last forty years, cannot be trusted with is the greatest tax that was ever attempted to be imposed upon the credulity of the public. That Dr. Keeley has a legal right to patent and keep his remedies a secret is not to be disputed, but to speak of him as a philanthropist in so doing, or to allow him any claim to that high eulogium, is a misuse of language. We fear that 'the angel wings of philanthropy are not long enough to cover the cloven foot of self-interest.'"

We agree wholly with the Advocate upon another point that "the chief objection to Keeleyism is the theory that all habitual drunkenness is a disease, and the general representation it makes that pledge signing, moral reformation, religion, and other moral considerations, without physical treatment, cannot deliver men from its thraldom." Drunkenness in its earlier stages, and in many of its later stages, is a vice and should be so treated in most cases. That it may develop disease and may lead to a diseased craving, we do not deny, but we do deny most emphatically that most men who drink are under the influence of a disease which they cannot control. The existence of this theory renders futile those powerful elements of reform which were so potent in the hands of Father Matthew, Gough, Murphy, Finney and a host of others. Thousands of men have reformed under moral and social influences alone, without any help either from drugs or religion. Statements such as are sometimes made in the advertisements of these cures to the effect that will power is no longer required in the cure of drunkenness, is baneful in the extreme.

While we by no means deny that many have been cured of the drink habit by the Keeley method, we do not find it hard to believe the conclusions reached by Dr. Buckley that about fifty per cent. of the graduates of the Keeley institutes relapse sooner or later. It is our belief that the second state of those who relapse is far worse than the first. The methods of Dr. Keeley from his first appearance as a vender of an infallible cure of inebriety by the means of bottles of medicine at $9 a pair, down to the present time, are not such as reputable physicians engage in or tolerate.

A Good Medical Journal.

The question, what constitutes a good medical journal? would elicit a great variety of answers, and each answer would illustrate very fairly the aims and mental caliber of the doctor making it. A subscriber in a recent letter referred to Gaillard's Medical Journal as a "helpful journal." This was extremely gratifying to us, as it clearly expresses our editorial objective point. We have no higher ambition than to issue from month to month a helpful journal for medical men.

A good journal cannot be other than helpful. If it is helpful it will certainly be interesting, and this should be another objective point of the medical editor. We do not mean amusing. There is a vast difference between the journal that is amusing and the one that is interesting. Men and women do not study medicine as a rule for amusement. Far less do they practise it for that purpose. The practice of medicine is an important and a serious matter to most physicians, and they do not wish a journal that treats it in a flippant or superficial manner. The man who selects a diet of sweets soon gets dyspepsia. If he shuns solid and nutritious food and takes a diet of scraps and ends, infant foods and gruel, he will fall into a state of malnutrition. If a doctor reads only a journal composed of scraps and fragments, prescriptions and therapeutic "hints," he will get a mental dyspepsia which he will find it difficult to cure. If he reads flippant journals which make a specialty of anecdotes, stories, alleged medical poems, and about everything except scientific medicine, he will get mental and professional anaemia which will become in time pernicious and beyond cure. The constant reading of light and trashy literature begets an inability to read serious and sound literature. This is especially true in medicine. The doctor who reads nothing but abstracts, prescriptions and amusing items loses the taste and in time the ability to read serious scientific articles. A good journal, like a rational diet, will contain a variety. It will contain both heavy and light articles. It will contain not only hints in therapeutics for every day use, but will also furnish solid articles which describe the progress which is being made in medical science. It will aim to keep its readers informed upon the progress of medicine and intelligent upon the advances which are being made from month to month. If it fulfills these offices it cannot fail to be both interesting and helpful to the thoughtful doctor.

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BOOK REVIEWS.

"Surgical Asepsis." By Carl Beck, M.D., Surgeon to St. Mark's Hospital; the German Poliklinik; Instructor in Surgery, New York Post-Graduate Medical School, etc. With 65 illustrations in the text and 12 full-page plates. Philadelphia: W. B. Saunders, 925 Walnut street. 1895. Pp. 12, 300. Price, $1.25.

We have had occasion to review during the past few months a number of works upon sepsis and antiseptic methods in surgery. The present work is one of the most complete which has yet appeared, and is extremely satisfactory. The author is an enthusiast and a believer to an extreme degree in the efficiency of the aseptic method. He is an earnest admirer of Lister and gives him full credit for the great discoveries which are justly attributable to him. In common with other surgeons, however, he lays but little stress upon antisepsis, regarding it as only the forerunner of the truer method—asepsis.

The first chapters are devoted to a consideration of the influence of microbes and the importance of sepsis and disinfection as well as prophylactic disinfection. The author goes fully into the subject of disinfection and sterilizing of instruments, dressings, and all elements used in operating. The aseptic operating room is fully described. The larger portion of the work is devoted to the general subject of aseptic operating. The illustrations are all very good and add much to the book. We cannot help a passing regret that the system requires the operator and his assistants to look quite so suspiciously like a band of ku-klux. Their appearance might well strike terror to the heart of the patient as well as the old style surgeon, who must be appalled at the vast number of things that the modern surgeon must know which his ancestors never dreamed of.

"The Antiseptic Club;" Transactions of. Reported by Albert Abrams, a member of the San Francisco Medical Profession. Humorously illustrating by pen and pencil the fads and foibles of modern Esculapians. E. B. Treat. New York. Pp. 200. Price, $1.75.

This is the book for which the world has long been seeking. It is the culmination of the work of the last two decades—an aseptic book, printed with antiseptic ink on iodiform paper, by antiseptic printers, and put up in an antiseptic dressing. The editor, who was suffering evidently from an extreme degree of mental hypertrophy, seems to have been rendered antiseptic and completely innocuous. His portrait on the first page is unquestionably that of a great man—a very great man. In certain features it is strongly suggestive of Æsculapius, while in others it reminds one of Aristophanes, Morgagni, and Bill Nye. He reflects rather severely upon the motives and skill of the average medical critic, believing that the tone of medical reviews depends largely upon the status of the digestive apparatus and the conceit of the reviewer. Notwithstanding his pointed criticism, we are constrained to say that "the work is replete with interesting reading," and as "it supplies a long felt want," "no physician can afford to be without it," although some of the wit has suffered a little through the sterilizing process and has been rather largely diluted. In other places we find that the wit is slightly ancient, but has not become so seriously infected by the bacilli of decomposition as to render it unsafe for the ordinary hardy condition of the medical stomach. We think, on the whole, if the work is peptonised and taken after meals it will do the doctor good.

"Urinalysis, including Blanks for Recording the Analysis and Microscopic Examinations of the Urine." For Medical Practitioners, Life Insurance Examiners, and Specialists. Arranged by Joseph C. Guersney, A.M., M.D. Philadelphia. J. B. Lippincott Company. 1895.

Urinalysis has become indispensable to the physician as a factor in diagnosis and prognosis. He not only wishes to make such examination for present use but frequently desires a record for future reference. In Bright's disease and diabetes particularly, it is necessary to successful management to know just where the patient stands. This can only be known certainly by reference to his condition at intervals during the past. The author has prepared a work which will prove a great help to the physician in this matter. It consists of five hundred blanks containing space for a record of almost every abnormal condition which may be found. They are bound into a handsome volume which renders the record permanent. The possession of such blanks tends to induce a more careful and complete analysis than would be made without it. A full index is provided for the patient's name so the record of each patient can be quickly ascertained. A brief description of the most important tests is given together with the apparatus and chemical reagents required. We are not acquainted with any other book of this character, and can commend it unreservedly as a valuable addition to the practicing physician's outfit.

"A Manual of Bandaging." Adapted for self-instruction. By C. Henri Leonard, A.M., M.D., Professor of the Medical and Surgical Diseases of Women, and Clinical Gynaecology in the Detroit College of Medicine. Sixth edition, with 139 engravings. Cloth, 189 pages. Price, $1.50. The Illustrated Medical Journal Co., Publishers, Detroit, Mich.

This is one of the best works on bandaging with which we are acquainted. The main feature for commendation of the book is that each illustration shows the direction of the various turns of the bandage with arrow heads, and each turn is properly numbered ; this renders the book a self-instructor to the reader. Besides the Roller Bandages the various Ts, Cravats, Slings, Tailed, Adhesive, and Plaster bandages, and Immovable Dressings are given. The book is divided into sections treating of The Bandages of the Head, of The Body, of The Upper Extremity, of the Lower Extremity, Knots, Strappings, Compresses, and Poultices with full description of making and applying them. The illustrations are well done and explain admirably the bandages which they are intended to represent.

"Cod-Liver Oil and Chemistry." By F. Peckel Möller, Ph.D. W. H. Schieffelin & Co., New York. 1895. Pp. CXXII, 484.

This is a most interesting work upon a most interesting subject. The first pages are devoted to a description of Norway and Norwegian life and of the Norwegian fisheries. The Lofoden Islands, well within the Arctic circle, are said to have the most important fisheries. Detailed accounts are given of the habits of the cod fish and the methods of the fishermen, together with a full description of the method of preparing cod-liver oil. The second portion of the work, occupying over five hundred pages, is devoted to a most elaborate description of chemistry, especially of the atomic theory of chemistry. The subject of ferments is also considered extensively. The work on the whole is a most instructive one to the medical man.

"Surgical Clinic" (illustrated). Complimentary to the visiting members of the Mississippi Valley Medical Association. By Prof. Augustus C. Brenays. 1895. C. B. Woodward Co., St. Louis, Pp. 3, 20.

This is the report of several clinics held by the author in November, 1894. A number of distinguished medical men were passing through St. Louis to attend the annual meeting of the Mississippi Valley Medical Association, and availed themselves of the invitation of the author to witness the operation described. The following operations were performed : Occlusion of oesophagus, lymphosarcoma of the neck, osteoplastic resection of the skull, nephrectomy, neurectomy, appendicectomies. The work is illustrated by several excellent half-tone plates.

PROCEEDINGS OF SOCIETIES.

Richmond Academy of Medicine and Surgery.

Stated Meeting, April 23, 1895.

WILLIAM S. GORDON, M.D., President.

Dr. J. Allison Hodges, leader in the subject selected for the evening's discussion, read a paper on Some of the Diagnostic Nervous Manifestations of Syphilis.

The nervous symptoms are more manifest in proportion to the absence of cutaneous symptoms. All the nervous symptoms are not always dependent on syphilis. A number of nervous diseases have their origin in this malady. In diagnosing the disease, the medication method is unreliable, some other affections being improved by it. The nervous symptoms may be developed in each stage of the disease, but it is in the tertiary stage principally, that the gravest lesions of the nervous system appear, and, since it is especially in those cases where the ordinary secondary manifestations were wanting that we are to expect these complications, it is important for physicians in making such a diagnosis to be prepared to recognize the first danger signals that may be manifested. The primary stage has no prominent nervous symptoms, those present being referable rather to the concomitant anemia than to the action of the specific poison. The secondary stage presents more marked evidences of implication of the nervous system—various neuralgias, dyspepsia of nervous origin, cardiac palpitatons, and meningitis, cerebral or spinal, being characteristically present. The tertiary stage gives evidences of numberless shades and varieties of nervous affection, and in this period of the disease the nervous symptoms manifested are due solely to the influence of the specific poison circulating in the blood and irritating the delicate nervous structures.

The symptoms produced may be those due to an inflammation or degeneration of the nerve centers themselves, or to the effects produced by pressure upon the nerve centers or trunks by product of this same form of inflammation located in contiguous structures—the symptoms all showing lesions either of the intracranial organs or of the spinal cord, less frequently of the spinal nerves.

The diagnostic symptoms detailed are also diagnostic of other diseases. It is by association that we determine the disease, as locality, etc. There are periodic occipital headaches in nearly every case, absent in the forenoon, returning most frequently at night and becoming worse. I have never found any tenderness on pressure. The diagnostic nervous manifestations of syphilis are: (1) Headache, which disappears if paralysis occurs; (2) insomnia, nearly always associated with headache and disappearing with the appearance of convulsions or paralysis. It differs from the insomnia of neurasthenia and melancholia in that it occurs in the early night, the victim arising in the morning ready for his daily labor. (3) Vertigo, occurring usually with the headache. It may be transient, but becomes worse as the disease progresses. (4) Convulsions. In the adult they are not preceded by convulsions as in youth. (5) Tremor, present in one-half of cases. It occurs most often, in the order named, in the hands, tongue, and over the whole body, and is accompanied by headache. If it occur in a limb, it is the precursor of paralysis of the limb. (6) Hemiplegia. (7) Erratic distribution of paralysis, as aphasia with or without hemiplegia ; ptosis ; insanity or epilepsy with paralysis of one arm or leg. It is suggested that ptosis occurring suddenly points nearly always to syphilis. (8) The use of electricity to determine central or peripherical lesion. (9) The presence of great physical weakness and mental dullness. This is one of the most valuable of the nervous manifestations, being out of proportion to the seeming condition of the patient. (10) History of the case. In women the history of many abortions in succession would point to syphilis. In the treatment of syphilis the iodide should be given in sufficiently potential doses in Carlsbad or other waters. The cases I report show how easy it is to overlook the disease in the tertiary stage, when the first and second were not noticeable. In conclusion let me say that we could often abort syphilis by studying the nervous system and giving treatment in time.

REPORTS OF CASES.

Dr. L. M. Cowardin.—Male, treated for necrosis of the superior maxilla and had lost a central and lateral incisor before coming into my hands. The necrosis was progressive. The case had been under treatment for ulceration of the nasal mucous membrane for sometime by a specialist who had sent him to me. The teeth were not dead, but they loosened and gradually dropped out, the bone dying, without inflammation, as they dropped. I suspected syphilis, which the patient denied at first, but he finally admitted it. He was then referred again to the specialist, who placed him on 120 grains of the iodide of potassium a day, with improvement in three or four days ; and in two weeks the necrosis had ceased and the ulceration healed. The patient mentioned a number of the symptoms detailed by Dr. Hodges in his paper.

Dr. D. A. Kuyk spoke of a case in which he is giving 250 grains of the iodide of sodium a day, where 150 grains of the potassium salt was not tolerated. He also reported a case of delayed manifestations of syphilis in a male, aged 64. There was an inter-laryngeal growth with aphomia and the other concomitant symptoms. A history of initial lesion at the age of 20 was obtained, and no symptoms intervened for 44 years. No result from treatment except checking of the growth. Tracheotomy was suggested, but the operation was refused, the man dying from suffocation subsequent to exposure.

Dr. Virginius W. Harrison reported a case occurring in the practice of Dr. Thomas J. Moore of early manifestation of syphilis in a male. On February 15 of this year, chancre appeared ; now—two months since—there are ulcerations, sore throat, and all the other symptoms.

Dr. Landon B. Edwards reported several cases of hepatitis due to inhalation of tobacco dust. In all the patients, there was threatened abscess, but none developed ; and all were benefited by phosphate of sodium. In all there were indications of cirrhosis of the liver, and of right heart disease. Neither did these develop. The affection did not occur in those rooms of the factories where there was no tobacco dust. The doctor has never seen this made mention of as a cause of hepatitis, and thinks it should be put down in the text books.

Drs. J. M. Winface and Harrison reported similar cases, the former of a girl in a cigarette factory, and the latter of a patient with cardiac enlargement so great that it resembled a tumor.

Dr. William S. Gordon presented two cases, each presenting one or more noteworthy points.

CASE I.—PASSAGE OF HARD, NON FUSIBLE PHOSPHATE OF LIME CALCULUS FROM BLADDER CASE II.—POLYURIA DUE TO TUBERCULAR PERITONITIS.

Case I.—The patient was a young man, about twenty-four years of age, who consulted me in November, 1894, for a dull, deep-seated pain in the left lumbar region. His health record up to that time was good. Suspecting, from the nature of his symptoms, that the kidney was the seat of trouble, I made a careful urinary analysis ; but finding no pathological condition, prescribed palliative measures and awaited results.

On February 24th last, he was seized with severe left lumbar pain, paroxysmal, characteristic of nephritic colic, and accompanied with nausea, vomiting, constipation, slight jaundice, and moderate but irregular rise of temperature.

I was called to him on February 26th, and the diagnosis made of the descent of a calculus from the pelvis of one of the kidneys. The symptoms pointed at first to the left kidney as the one involved, but subsequently the pain extended across the back, and centered mostly in the right side towards the termination of the attack. Cathartics, hot applications, and baths, alkaline diuretics, demulcents, and morphine comprised the treatment. The suffering was at times intense, giving rise to epileptoid seizures.

On the morning of March 5th, the calculus started on its urethral journey—having passed into the bladder a day or two previously—and dropped into the vessel after the patient had struggled with it for fifteen minutes. He celebrated the event, much to my regret, by sitting up in bed and whittling upon the stone with a pen-knife; so that I cannot show it to you in its entirety.

My own analysis of the stone proving unsatisfactory, Mr. Hugh Blair kindly undertook the task, and after some difficulty proved it to be an unusually hard, non-fusible phosphate of lime calculus. It is one of the largest I have known to pass from the pelvis of the kidney, weighing eight grains. It must have weighed originally about twelve grains.

Since his attack the patient has suffered from obstinate biliousness, but is now rapidly regaining his health.

Subsequent inquiries reveal that for two years or more he resided in a marked limestone region, drinking the water, and being troubled with more or less indigestion. This is stated for what it is worth. During the attack the urine was excessively acid, scant, and bile-colored, but otherwise normal. The patient says that, previous to the attack, he had been passing a brick-dust deposit, and that several days before the passage of the large calculus, a small, though softer, one had appeared in the meatus. I had no opportunity of examining the deposit, or the smaller calculus, and am therefore in doubt as to whether the phosphatic preceded a uric acid condition in this case.

It would be instructive to know what relation, if any, or association there was between the two. The future may solve the problem.

Case II.—A colored child, six years of age, was brought to me last summer with dyspepsia, debility, and some emaciation. The symptoms pointed at that time to gastric disturbance, for which I prescribed, charging the mother to inform me within a reasonable time of the patient's condition. I heard nothing more of the case until December last, when she was brought to me again with symptoms about the same in character, but more pronounced. I prescribed an alterative tonic and requested that the child be brought to me again for closer examination.

This was not done, and I did not see the case again until March 1st of this year. The symptoms were as follows: Anorexia, anæmia, marked emaciation and debility, irregular chills and fever, œdema of the feet and legs, diarrhœa, and extreme thirst and polyuria. The lungs and heart were normal, and no family history of tuberculosis was obtainable. The temperature on March 2d, at 12:30 P. M., was normal, and the pulse one hundred or more.

The mother's statement that the child drank from half a gallon to one gallon of water a day and passed an equal amount of urine, coupled with the fact that I was not permitted to watch the case, led me to suspect diabetes mellitus. The analysis of the urine, however, showed it to be almost like pure water, the specific gravity being 1,000, with an acid reaction. No phosphates were precipitated, but the sulphates and chlorides were noticeable. At my next visit I examined the abdomen, finding it swollen and tender; and the diagnosis of tubercular peritonitis was easily made.

Slight improvement took place under alteratives and tonics, with a decrease of the thirst and polyuria; but treatment soon became inefficacious, and the child died from exhaustion on the 9th of this month.

It is well known that so-called diabetes insipidus may be caused by certain abdominal diseases. Polyuria is probably a better term to express the renal condition associated with abdominal trouble, inasmuch as true diabetes insipidus is supposed to be dependent upon direct or reflex excitement of certain areas in the bulb. Tubercular disease affecting the bulb in any way would cause polyuria through local dilatation of the renal blood-vessels; but just as likely this would be counterbalanced or overcome by the contraction of the renal vessels, which is disproportionate to the contraction of the abdominal vessels, dependent upon the morbid stimulation of the cord. We are thus led to believe that abdominal disease leads to polyuria by pressure upon the abdominal blood-vessels, or stimulation of the abdominal vaso-constrictor nerves, both of which conditions would increase the renal blood pressure and thus result in polyuria.

The practical point to bear in mind is that polyuria may be one of the most prominent symptoms of tubercular peritonitis, even when the abdominal symptoms are not marked. The tympanites in this case was not always very noticeable, and the other abdominal symptoms could have been caused by other morbid states. In such cases the underlying morbid condition may escape detection unless great care be exercised. Mark W. Peyser, Secretary.

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We are in receipt of the first number of a new journal entitled "Medicine." It is edited by Harold N. Moyer and published by George F. Davis. It is a monthly journal of sixty-four pages, very neat in appearance and well made up.

MEDICAL NEWS AND NOTES.

Dr. C. W. Stiles, of the Agricultural Department, Washington, has written an article "On the Rarity of Tenia Solium in America." Dr. Stiles describes the different kinds of tenia. The tongue of the beef is a favorite place for these parasites to collect, and those who are fond of beef-tongue sandwiches run considerable risk.—Record.

The Weather Bureau has inaugurated a study of the climatic conditions of American health resorts. Resident observers will be appointed in the various regions and their investigations compiled into definite data, which may be utilized by the physician when selecting a clime for patients obliged to change their abode.

The Albany (New York) Medical Society has 160 members; the Buffalo Academy of Medicine has a membership of 120; the Chicago Medical Society, 750; the Cincinnati Academy of Medicine, 338; the Cleveland Medical Society, 291 ; the Kings County (Brooklyn) Medical Society, 575; the New York County Medical Society, 1,400; the Philadelphia County Medical Society, 669.

We are glad to notice that the recent outcome of the discussion of the Keeley cure in Massachusetts has brought forth good fruit. The Physician and Surgeon says that in 1893 Dr. B. D. Evans, who, by the way, is a medical director of the New Jersey State Hospital for the Insane, gathered statistics from the asylums for the insane throughout the United States, and compiled and published a paper embracing the number of cases of relapse, suicide, mania, and dementia following the Keeley treatment. The article was reproduced in a Boston newspaper, and, coming to the notice of the Keeley people, they applied to the Temperance Reform League of the Bay State for an examination into the matter to the end of their "cure" might be vindicated. By virtue of its charter from the state the League is a quasi-court with functions equivalent to those of a judge who examines conflicting medical evidence in a suit for malpractice and announces the result. The outcome of the deliberations is an endorsement of Dr. Evans by election to membership in the League, and an abandonment of the Keeley offices in Boston. About the only result of the Keeley cure now left is that a large number of persons from all parts of the country have generously contributed toward giving an immense fortune to the originator of the movement.—Pract. Med.

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ORIGINAL ARTICLES.

MOVABLE KIDNEY.*

BY CHARLES P. NOBLE, M.D.,

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Philadelphia.

I desire to call the attention of the society to the subject of movable kidney, especially as met with in women. In order that my remarks may not exceed the brief limit prescribed by the society, I shall limit myself to my own investigations concerning this condition. It will be seen that in most respects my observations and conclusions are similar to those of other gynecologists, who have studied this subject.

Frequency.—A movable and displaced kidney is a very common condition among women. I find that about one-fourth of my patients have a movable kidney. I do not affirm that this is true of the community at large, but only of the class of patients that consult a gynecologist. The right kidney is much more ferquently displaced than the left ; indeed, I have not seen the left kidney displaced independently of the right. In about every tenth case both kidneys are displaced, the right usually more than the left.

Causation.—Various causes have been assigned for the occurrence of movable kidney, such as falls, pregnancy and tight lacing. My experience leads me to believe that these causes are operative in only a limited number of the cases. With one exception all the patients having a movable kidney that I have seen have been thin, that is the supply of adipose tissue has been abnormally small. The single exception was a

* Read before the State Medical Society of Pennsylvania.

woman having a pendulous abdomen, with a resulting downward displacement of most of the abdominal viscera. I find movable kidney very frequent among the well-to-do and the poor, the married and the single, the fertile and the sterile, and the one point that they all have in common is that they are thin, or even emaciated. This experience leads me to believe that the lack or the loss of adipose tissue, is the underlying cause of movable kidney. Anatomical considerations also favor this view, as the kidney has no proper ligaments, but is held in place by the cellulo-adipose layer of tissue in which it is embedded. I have no doubt that tight lacing, laborious work, and multiple pregnancies, leading to relaxation of the abdominal walls, are factors in the production of movable kidney in certain cases, but they are most apt to displace the kidney when it is poorly supported owing to the absence of a normal deposit of fat in the renal region.

Symptoms.—The symptoms of movable kidney are both reflex and local. The reflex symptoms are sometimes general, but more usually abdominal. Many patients are extremely nervous, having the manifold symptoms which accompany an irritable condition of the nervous system. Others suffer from indigestion of varying degree, from the mildest type to the most extreme. Bloating from distention of the bowels with gas is a common symptom. This is frequently accompanied by palpitation of the heart and by cardialgia. Neuralgic areas are met with in many patients, pain being referred most often to some point in the abdomen, and to the region of the heart. The local symptoms of movable kidney vary extremely in degree. The symptom most commonly complained of is a sense of dragging or weight, which is most annoying after prolonged standing or walking. In extreme cases the patient becomes aware of the presence of the movable kidney, and recognizes it as a tumor, which is painful and annoying. Severe pain in the kidney itself is not a frequent symptom, but is met with in rare instances, being due probably to extreme congestion of the kidney from traction on the renal veins in some cases, and in others to obstruction of the ureter due to a twist or kink in this organ, giving rise to an acute hydro-nephrosis. Acute strangulation of the kidney had been reported, being due to obstruction of the renal veins by torsion of the kidney on its vessels. This condition is rare, and I have not met with it. Broadly speaking the reflex symptoms are less marked in cases having extreme displacement or mobility of the kidney. This is quite analogous to what is seen in the pelvis. Prolapsus uteri of moderate extent is accompanied by marked reflex symptoms, whereas a complete procidentia gives rise only to the local annoyance of a foreign body between the thighs, which interferes with walking. The explanation probably is, that in extreme displacement the nerves become overstretched, and that the circulation has time to adjust itself to the changed conditions.

In my experience, in probably half the cases, the mobility of the kidney does not give rise to symptoms, so that many cases of this condition will be overlooked unless routine examinations are made.

Symptoms referable to the bladder and to the sexual organs, resulting from a movable kidney, are frequently present, but are by no means constant. In the nervous or neurotic cases, a so called irritable bladder is the symptom usually complained of. When the mobility of the kidney is more extreme, and the symptoms are more purely local, attacks of pain beginning in the kidney itself, and passing along the ureter to the bladder, are not infrequent. Variations in the amount of urine passed in the twenty-four hours, are at times due to a twisted ureter.

Dysmenorrhea is frequently associated with a movable kidney. The sensation of dragging or weight in the lower abdomen is, I am convinced, frequently attributed to pelvic disease, when it is due to a displaced kidney.

Diagnosis.—The existence of a displaced kidney may be suspected when a thin woman complains of general nervous symptoms, palpitation of the heart, indigestion, bloating, neuralgic areas, a sensation of dragging in the lower abodmen when standing, the inability to sleep when lying upon one or the other side, and finally, when pain is complained of in the renal region. The diagnosis, however, can be established only by a physical exploration, and the discovery of the kidney in its abnormal location, together with the fact of its undue mobility.

In order to establish a diagnosis of a displaced and movable kidney, its proper location must first be agreed upon, and also the degree of its mobility.

The position of the kidneys is variously stated by automatical text books. Thus Gray states that the lower border of the kidney is near the crest of the ileum, the right being lower than the left. McClellan states that the lower border of the right kidney reaches to the third lumbar vertebrae, that of the left not so low. It must not be forgotten that the results of the investigations upon the dead and the living may vary; at all events, I am not disposed to accept these statements as to the usual location of the kidneys. In three-fourths of the cases examined by myself the kidney could not be palpated; in other words, neither kidney extends below the margin of the ribs. We must not forget, however, that the angle between the last rib and the spinal column is an acute one, well filled in by thick muscles, and that the kidney might extend slightly below the border of the rib at its junction with the vertebrae, without being apparent upon a clinical examination. From my standpoint, however, as in three-fourths of the cases examined the kidney could not be felt, it must be accepted that its normal, or in other words its usual position, is above the lower border of the ribs. As the distance between the lower border of the ribs and the ileum varies extremely in different patients, an allowance should be made for this fact in determining whether or not a kidney is abnormally low. I have no doubt that it is normal for the kidney to extend below the border of the ribs in some of these cases.

The kidney is normally a movable organ, which descends with each inspiration, and ascends with each expiration; therefore, we must have some standard to determine whether or not a given kidney is abnormally movable. A kidney may be displaced but not movable. It may be fixed in its abnormal position by adhesions. Doubtless in some cases it is congenitally located in an abnormal position, and gives rise to no symptoms, having in this case only its normal mobility. I would suggest as a criterion to determine whether or not a kidney is abnormally movable, the fact that it fails to ascend during expiration. When kidneys are very movable and much displaced their position is but slightly influenced by respiration.

For some years, in my practice, I searched in vain for movable kidneys. During that time I followed the method of examining the patient when she was lying on her back. I understand now why I failed to find the movable kidneys. It was because that in this position they slipped up above the margin of the ribs. In my entire experience I have felt not more than half a dozen kidneys with the patient lying on her back. These were cases of extreme displacement of long standing.

It occurred to me that by examining the patient standing the diagnosis could more easily be made, and experience has shown that this was one thing lacking in my previous investigations. The examination should be conducted as follows: The patient's clothing should be loosened, all bands about the waist unfastened, and the skirts supported by a nurse or assistant, so that the patient will not be embarrassed with the fear that her clothing will fall off. She should then stand before a table or desk of convenient height, about thirty inches, with the examiner seated upon her right. The patient then bends forward from the hips, and supports some of her weight by resting her hands upon the table. She is directed to respire regularly, care being taken to relax herself thoroughly during expiration. The examiner's left hand is placed against the lumbar region posteriorly, and his right hand in a corresponding position in front of the kidney. By a conjoint manipulation the region between the two hands can be carefully palpated, and if present the kidney is easily recognized. The points to be looked for are the shape and size of the kidney, and the fact that it can be readily displaced upwards beneath the margin of the ribs, and that it will return to its former location so soon as the examiner's hands no longer support it. When the kidney is compressed, as a general rule the patients complain of tenderness or pain of a peculiar character, and often make the statement that the pain causes them to feel faint or somewhat nauseated.

The kidney must be differentiated from pelvic tumors, from tumors of the bowel, from the displaced liver, and from the distended gall-bladder. Pelvic tumors can be excluded as a rule, because their range of mobility is downward rather than upward. The contour of the tumor is also of service in differentiation. The displaced liver is much more bulky, and as a rule, the thin lower border of the liver can easily be distinguished from the rounded border of the kidney. The distended gall-bladder is to be distinguished by its small range of mobility, and usually by the history pointing to liver disease. Tumors of the bowel, usually malignant in character, might be mistaken for the movable kidney, but this is not likely, as by the time such tumors have grown sufficiently in size to be recognized by palpation, the history as a rule points definitely to the character of the disease. In all such cases, if the patient be fat the supposition is against the existence of a movable kidney.

Treatment.—The subject of movable kidney is comparatively so new, that up to the present time I have been extremely careful of my advice in such cases. I have taken every opportunity to watch the progress of the cases, and have directed treatment to the condition itself only when the sufferings of the patient absolutely demanded it. In a large percentage of the cases passing through my hands, I believe in nearly half of them, the symptoms complained of have been comparatively trifling, and symptomatic treatment has been sufficient to make the patients comfortable. That is, I have treated these patients just as I would had they presented the same symptoms with the kidney in its normal position. In these cases the good results have been due to improving the general health of the patient. As the patient's general health improved, the various nervous disturbances disappeared. In the other half of the cases, and I think the larger half, though exact notes of all the cases have not been kept, symptomatic treatment has failed absolutely in giving relief.

Believing that the normal support of the kidney is the peri-renal fat, it has seemed to me a rational plan of treatment to use such measures as will increase the body weight. I have made use of the rest cure, strictly carried out, in five cases of movable kidney, and of a modified rest cure in a number of other cases. The results obtained have not been satisfactory. The nervous symptoms disappeared for a time during and after the rest cure, but in every case they have returned to a greater or less extent. The results have been equally disappointing as to the improvement in the position or mobility of the kidney. In the future I shall recommend the rest cure only for patients having a very moderate displacement of the kidney, for example not exceeding two or at the most three inches; being guided also somewhat by the probable duration of the displacement. It seems rational that this method of treatment should be curative in the milder cases, because while the patient remains on her back, the kidneys keep their normal position. If now the body weight be markedly increased by the increase of adipose tissue, it seems rational that a cure should be effected.

I am convinced from the experience I have had, that the rest cure will be a source of disappointment if used with the idea of curing the more severe cases. In such cases it will improve the general health, but will not markedly influence the local condition.

I have done nephrorrhaphy in but six cases, in two of these doing a double nephrorrhaphy. This experience is too small to be of special value, so that I shall merely say that the results obtained have so far been very satisfactory. In the past I have hesitated to advise nephrorrhaphy, first because I did not know from experience how much or how little could be done by non-surgical means, and second the reports from other surgeons as to the results obtained by nephrorrhaphy were conflicting. From a study of my own cases, and what I have seen in the practice of others, I believe that nephrorrhaphy is a simple and safe operation in the hands of a surgeon of experience, and that the results obtained by it are satisfactory, the symptoms due to the movable kidney are relieved, and the kidney remains permanently fixed in its new position. My own cases are so recent that they must be left out of consideration in deciding whether or not the kidney remains permanently fixed by the operation. This opinion is based upon a study of the recent literature. The percentage of cases in which the kidney again becomes displaced is quite small. In the future I shall advise nephrorrhaphy whenever the displacement is marked, and the symptoms sufficient to interfere with the patient's enjoyment of life, or the performance of her usual duties. The indication, of course, is more marked when the symptoms complained of are localized in the kidney itself, especially when the displacement leads to attacks of renal colic, or to hydro-nephrosis. In such cases destructive lesions of the kidney are apt to follow if the displacement is not corrected. Calculus, pyelitis, hydro-nephrosis and abscess of the kidney, not infrequently result from displacement of the kidney.

Conclusions.—Movable kidney is a very common condition among women. I find it in one-fourth of my own patients. Both kidneys are movable in about one-tenth of the cases.

The underlying cause of movable kidney is a deficiency of adipose tissue, especially in the peri-renal region. Tight lacing, multiple pregnancies and falls, occasionally act as contributing causes.

The symptoms of movable kidney are both reflex and local. The reflex symptoms are those at times of neurasthenia, irrespective of its cause. In other cases, nervous dyspepsia, palpitation of the heart, distention of the abdomen with gas, and neuralgic areas, are the symptoms complained of. Patients usually are unable to lie upon the side opposite to the movable kidney. The local symptoms are a sense of weight or bearing down, soreness in the kidney region, attacks of pain similar to renal colic, and in rare instances symptoms of strangulation due to torsion of the vessels of the kidney.

Movable kidney may be suspected when its rational symptoms are present, but the diagnosis must be made by a physical exploration. This should be made with the patient in a standing position. The diagnosis can be made with the patient lying on her back only in long standing cases, where the displacement is extreme, as usually in the position the kidney slips up under the margin of the ribs. In many cases movable kidney gives rise to no symptoms, and therefore does not require treatment. The rest cure promises to be efficient in cases of slight degree, as the kidney returns to its normal position while the patient is lying on her back, and the increase in fat, which the rest cure usually brings about, should effect a cure. The rest cure used in cases of long standing, with extreme displacement of the kidney, will improve the general condition of the patient, but will not improve the local trouble. Nephrorrhaphy is a simple and safe operation, which should be done in the cases having well marked displacement, that is three inches and upward. The more marked the local symptoms, the more necessary is the operation. The reported cases indicate that the results are permanent.

The object of this paper is to emphasize the great frequency of this condition, and the ease with which it can be diagnosticated. Also, to urge upon those who have not done so, the necessity for studying its relation with the various reflex and nervous symptoms met with in thin women.

1637 N. Broad street.

THE SURGICAL TREATMENT OF DYSENTERY.*

BY E. L. PATTERSON,

Barnwell, S. C.

Perhaps no disease which we are called upon to treat is more unsatisfactory, so far as the results of the treatment employed, than the one under consideration.

Until recent years, little or no advance had been made in the treatment of dysentery; but advancing science, with the introduction of antiseptics, and a better knowledge of hygeine, has done much to eliminate this disease. It is one of the oldest known diseases in its clinical history. Hippocrates, 430 B. C., made frequent reference to the disease, and the ancient writers observed that it was a disease of spring and summer and in some way was connected with heat and moisture.

Opium, at this period, was used extensively in the treatment of this disease and was considered the "sheet anchor;" it was used in the form of the juice of the poppy. By the time of Galen, it was used to such an extent as to call for protest against its abuse.

Sydenham, in 1669 A. D., was an ardent advocate of the opium treatment, but prefaced it with a laxative; he also flushed the rectum with liquids—all of which might be considered good treatment at the present day.

Zimmerman, in 1720 A. D., discarded venesection, and was among the first to recognize the value of ipecac and objected strenuously to the use of opium until the alimentary canal was cleared by appropriate cathartics. This marks an important era in the treatment of this disease.

A writer of repute has said that dysentery was pre-eminently a disease of army life, its victims, among soldiers, numbering more than all other diseases put together. It has followed the tracks of all the great armies which traversed Europe during the Continental wars of the past two hundred years.

It decimated the French, Prussian, and Austrian armies in 1792, and in our late Civil War, camp dysentery played an important role, causing a large death rate among the soldiers and a still greater among the prisoners.

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* Read before the South Carolina Medical Association, 45th annual meeting, held in Columbia, S. C., April 25, 1895.

It is not my intention to go into the clinical history of this disease, to any great extent, but simply to call attention to a mode of treatment which, as far as I have been able to learn, has never been employed by the profession or others, and which in my limited experience has proved a specific and to which I have seen fit to apply the term "surgical."

In my locality, every spring and summer, we have an epidemic of dysentery, beginning usually among the negroes, but extending likewise to the whites. In these epidemics I have had ample opportunity for study.

I observed that there was a spasmodic contraction of the anus and this condition I thought was due to the irritation in the rectum which excites the sphincters into firm contraction, the contracted condition of the sphincters I concluded prevented a complete evacuation of the contents of the rectum and thereby produced the termina and tenesmus so characteristic of this disease. Having reached these conclusions, I determined to try dilatation of the sphincters and operated as for fissure in ano. The result was so gratifying that I have continued this mode of treatment and now immediately upon seeing a case, I dilate both the internal and external sphincters, but not quite to the extent as for fissure in ano. It is my custom to give a little chloroform, though I have operated on quite a number without doing so.

The fever which accompanies dysentery is not the result of any inflammatory condition which exists in the rectum, for in the puerperal condition, we have a more inflamed condition and yet no fever unless from sepsis; and we do not anticipate fever in our surgical operations unless from lack of antiseptics, therefore we must conclude that the source of fever in dysentery is the result of septic absorption.

The after treatment consists in irrigating the rectum with antiseptic and astringent solutions, though boiled warm water, one quart, with the addition of two drachms of powdered borax has given me as good results as anything else. After the dilatation of the anus the dysenteric evacuations cease.

The internal treatment consists of the usual remedies—calomel, ipecac, and salol, in small doses, and repeated hourly, until the physiological action of the calomel and ipecac is obtained, followed by a saline cathartic, being my preference, and if necessary, morphine grains $\frac{1}{4}$, atropine grains 1-150 hypodermically to relieve pain.

The diet should consist of broth and raw eggs. As our water in the country is all surface water, I order boiled water for drinking purposes.

The sanitary surroundings should be looked after and all of the evacuations should be disinfected.

The room should be well ventilated and the bedding frequently changed.

Poultices are valuable aids, not so much on account of the material of which they are made, but because they retain the heat for a long time. There is a right and a wrong way of making a poultice. Heat and moisture are the two requisites. Whatever be used, whether flaxseed, oatmeal or what, it should be cooked well with water, and if it be soft, some thickening substance may be added. It should be spread on a piece of linen and not too thin. It may be from half an inch to an inch thick. Cheesecloth, muslin or other substances hold a poultice better than linen, but the latter is smoother and more agreeable to the skin. The material should be laid out and the poultice spread over it in a thick layer and then another layer of the linen, or whatever is used, should cover the poultice and the edges be folded over so that none of the flaxseed comes in contact with the skin. Two poultices should be made, so that one may be kept hot while the other is in use, for when a poultice begins to cool off it should be changed. As poultices have a certain amount of weight, they should never be laid on the chest or abdomen of a child, as they impede the breathing and do more harm than good.—Popular H. Magazine.

We notice in the New York Medical Record that Dr. Achilles Rose exhibited a cannon-ball, weighing over three pounds, a form which had given satisfaction to himself and others in constipation. Any man who would take three-pound cannon balls must have a lavish digestive cavity, and an awful constipation. The generous pink-tinted oral cavity of the hippopotamus might smoothly gulp them ; but we would not, for our part, take them under any circumstance unless they were powdered or sugar coated. They will never be popular. This is too much like heroic medicine.—Railway Surg.

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WHAT SHALL WE DO WITH OUR ALCOHOLIC INEBRIATES ?*

BY J. W. GROSVENOR, A.M., M.D.,
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The term inebriate in this paper will refer to all shades and degrees of inebriety. The person who is drinking moderately, or having his first drunk, is inebriated as well as the habitual drunkard. The difference between these two classes of inebriates is only in degree. The proper care of the alcoholic inebriate is a problem whose solution has had assiduous thought and profound study from time almost immemorial. Wise statesmen and broad philanthropists have given it their best energies. The medical profession has not been unmindful of its importance as evidenced by the great mass of literature upon it published in medical journals and by discussions at medical meetings. So thoroughly has this field been cultivated that nothing new or startling will be attempted in this paper by way of enumerating the evils of inebriety or recommending a plan for their cure. The continued existence of these evils apparently without abatement and a great lack of unanimity of opinion upon the best means to be used for their restriction and suppression, are a full warrant for a discussion of this question at every convenient opportunity; indeed, it calls loudly to the medical profession for an enlightened and persistent consideration, and an answer which will meet the exigencies of the situation.

The alcoholic drink-bill of the nations is appalling. It easily foots up into many billions annually. Concerning the death-rate from alcoholic inebriety it is doubtful if reliable statistics are obtainable. Estimates carefully made on this point by competent writers state that it carries to the grave yearly from 60,000 to 100,000 of our citizens. The observation of the writer has led him to the conclusion that oftentimes deaths from alcoholic inebriety are reported by attending physicians as due to some other disease out of regard for the sensitive feelings of friends. Even though the above estimated death-rate may be regarded as too large there is no doubt that the death-rate from this disease is very great, running up annually into scores of thousands; indirectly it is probably responsible for a far greater number than 100,000. It is the foundation of many diseased conditions of the nervous system, liver, heart, kidneys, lungs; indeed, the inebriate is likely to suffer from a perversion of nearly all the solids and fluids of the body. Not infrequently the inebriated life ends in insanity, idiocy, epilepsy, fatty degeneration of the heart, cirrhosis of the liver, paralysis, Bright's disease of the kidneys, phthisis pulmonalis.

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* Read before the American Academy of Medicine at Baltimore, May 6, 1895.

The number of yearly arrests for drunkenness in all our large cities points to an increase of this disease. During 1894 in New York city there were made 19,538 arrests for drunkenness, as shown by records of the police department. In Great Britain in 1890 there were 173,036 convictions for drunkenness. In 1892 33,000 women were convicted for drunkenness in the same country. Dr. Crothers has estimated that a million and a half of the inhabitants of the United States are constantly suffering from alcoholic inebriety. It has been estimated that in Great Britain there are 700,000 habitual drunkards.

Oftentimes heredity plays a large part in the life of the alcoholic inebriate. The appetite for alcoholic intoxicants received from some ancestor leads on to dipsomania and a thousand ills of the flesh, to distortion of the intellect and immorality.

Alcoholic inebriety is the prolific mother of crime and poverty ; it disturbs the inalienable rights of the peaceful citizen and imposes a heavy burden upon the taxpayer ; no other force is so potent in undermining the integrity of our national life. Accurate statistics relating to murders committed by alcoholic inebriates are not readily obtainable and are more or less unreliable. Coroners in reporting such cases are not always careful to state that inebriety was their genuine cause. Compilers do not always mention the cause of murder, even though it may have been stated correctly. Such statistics do not declare the whole truth, and hence are misleading. A prominent liquor paper concedes that nearly 500 murders are committed annually in this country as the result of alcoholic inebriety. Dr. Story states that the number of murders from drunkenness annually committed in the United States is 600. According to a high-license journal, 1,130 murders were caused by liquor in the United States in one year. Remarks similar to the above are applicable to the difficulty of obtaining accurate statistics concerning those suicides which are committed by the alcoholized maniac. The real cause of the suicide is often buried under a wrong name. The reader of a daily paper of any of our large cities must be satisfied that the suicides from this disease are very numerous. Dr. Story places the annual number in the United States at 400. In 1893 in Prussia occurred 500 suicides among inebriates. Prof. Westergaard has said that out of 100 suicides in Denmark forty-four were notorious drunkards. In France 401 was the number of suicides from drunkenness in 1886.

Alcoholic inebriety plays an important role as a cause of accidents. The shipmaster, railroad engineer, trolley motorman, cable gripman, coachman, and all kinds of vehicle-drivers, inebriated by alcohol send many an innocent victim to death. The alcoholized brain of husband and father is responsible for many disfigured wives and crippled children. I forbear to present in detail more of the evils for which alcoholic inebriety is directly responsible. Their severity and universality are well known. By their enormity and ever-increasing outflow they are a constant menace to the stability of the republic. Their restriction and extirpation demand the best services of physician, philanthropist and citizen.

For the requirements of this paper alcoholic inebriates may be clasified in accordance with their drinking habit as follows :

1. The moderate drinker.
2. The excessive drinker.

The moderate drinker takes a glass of liquor occasionally, say of wine or beer with his daily meals or socially with a friend in the evening and once in a while some stronger alcoholic beverage. Perhaps, at long intervals he may drink enough to become slightly intoxicated. As soon as his drinking habits have carried him to the point where his intellect and physical system have become visibly affected as shown by his conduct, he may be properly classed with the excessive drinkers. Notwithstanding his moderation he is daily poisoning himself with alcohol ; he is an inebriate and is suffering from the disease of alcoholic inebriety.

What shall be done for the moderate inebriate ? As long as he keeps within the bounds of decency, has not become a nuisance, is able to take care of himself, his family, and his property intelligently, is not a menace to the peace and welfare of society, has committed no crime, the law cannot take any cogni.ance of his acts. He may be guilty of withholding from those naturally dependent on him, from society and from the State his best services, but for this the law cannot punish him and can place upon him no restraint. The total abandonment of the drinking habit is all-important for this class of drinkers. As long as the habit is continued, fuel is being added to a fire which is gradually destroying the physical and mental integrity. All reasonable methods which will accomplish this object should be adopted. In this matter the medical profession has an obligation which it should discharge with strict fidelity. In doing so it should become a wise counselor and teacher. On account of its anesthetic property alcohol is a deceiver and hence the moderate taker of it may not realize its damaging effects till he has been using it for many years. He may call his physician for a disease which is the result of his ingestion of alcohol. Then is the time when the wise and humane doctor, without being subject to the charge of intermeddling, can and should clearly and forcibly point out to his patient the dangers of the road which he is traveling and the goal of a wrecked life which he is sure to reach if he does not abandon his inebriating habit. The physician who does not adopt this course does not assume the high privilege to which his position entitles him and fails to do his duty to the patient under his care : his professional obligation binds him to aid the weakened will by all forces at his command, and by proper regimen and medication to restore, if possible, the injured system to its former healthy condition.

By public addresses, magazine and newspaper articles, private conversation, and especially by example the members of the medical profession can teach influential lessons on this subject to the communities in which they reside. They can show the poisonous nature of alcoholic beverages, their ravages upon the various organs of the body even when taken moderately, their power to weaken the will and moral sense, their inutility in aiding the vital processes of the healthy body and in conducing to longevity, the danger that a moderate habit will lead to an excessive habit. The people will listen more attentively to such teachings from the medical profession than from any other source. This is a work to be done in behalf of hygiene and along the line of preventive medicine. The physician can find no broader field for the exercise of his noblest powers.

The excessive inebriate is generally the outgrowth of the moderate inebriate. He drinks to such an extent that the alcohol makes a profound impression on his system; one or more of the diseases of which alcohol is the prominent causal factor, fastens upon him: the nervous system is specially affected, as shown by unsteady gait, trembling hands, altered speech ; those phases of inebriety known as delirium tremens and dipsomania may follow ; mental alienation is oftentimes a sequence ; the victim may become demented ; the baser faculties are roused to increased activity and control the moral forces; the man is overwhelmed by bad passions and, may commit crimes of all kinds and degrees. The excessive inebriate is a diseased, degenerated individual. He belongs to the vast army of defectives; he is a dangerous character, a constant menace to the welfare of home, the peace and good order of society ; at times he may have the appearance of comparative physical health and mental soundness, may even attend to his business with a certain degree of exactness, but the hour when the alcoholic poison will assume dominion over him no one can foretell;

his relation to his environment is very similar to that of an insane person, and to a large extent he should be treated as are the insane; indeed his case often assumes a form of insanity.

For the treatment of the excessive inebriate many plans and devices have been suggested—some being the product of dense ignorance and a barbarian age, others, the outcome of an enlightened spirit of scientific investigation. The inebriate will not receive the best treatment for restoration to physical and mental health until alcoholic inebriety has been clearly recognized as a disease both by the medical profession and the laity. All along the centuries the excesses of the habitual drunkard have been regarded as of sufficient importance to call for restraint and punishment. The severe laws of Draco punished drunkenness with death. In the early history of the Massachusetts colony each offence of treating and drinking to the health of another was punished by a fine of fourteen pence. In St. Petersburg at the present day, "Any one found drunk in the street is imprisoned from one to three days and the person from whom the last drink was bought, if he can be found, is fined from five to twenty-five roubles." The present law of Minnesota punishes drunkards with fine and imprisonment. Massachusetts has a law which makes imprisonment the only punishment for drunkenness. In Sweden, if a man is seen drunk four times he is deprived of his electoral vote. By advice of its best physicians, Saxony has made drunkenness a crime.

During the last twenty-five years homes for the alcoholic inebriate of both a private and public character have been established in this country and in Europe. Dr. Crothers is authority for the statement that in 1887 there were fifty hospitals in America for the treatment of inebriety, with over 1,000 patients, besides about 1,000 under treatment in private families. In a few instances inebriate hospitals have been founded and are supported by public moneys.

The particular method of treatment adopted for the excessive inebriate has depended largely upon the view taken of his condition. He has been regarded as diseased, as vicious and as a criminal. The physician who makes inebriety a specialty insists upon medical treatment; the reformer advocates moral suasion and a strengthening of the will by educational influences ; the magistrate adopts a system of fines and imprisonment. It is my belief that the alcoholic inebriate has all three characteristics. He is suffering from disease, has adopted a vicious habit, and not infrequently commits crime. His disease, which is the result of heredity or a vicious custom, demands the serious attention and profound skill of his physician. In its eary stages it should not be neglected, as is too often the case. As a general rule neither the inebriate himself nor his family apprehends any danger until his inebriated condition has become chronic and he has gone far on the road which leads to delirium tremens or dipsomania or dementia; indeed, the suggestion that he requires any formal or persistent treatment in the early period of his malady is met with a positive denial. But this stage of the disease is the most hopeful for restoration to former soundness of mind and body; this is the time when friends and physicians should be on the alert, for now considerate care and treatment may save from disappointment and ruin. Treatment in a hospital specially adapted for the purpose has many advantages over treatment at home. The patient will be placed outside of an environment which has contributed to a continuance of his vicious habit, he will be prevented from transmitting any of his characteristics to a future generation, he will be kept from committing crime, he will be under the superintendence of physicians who have made his disease a special study; he will have the constant care of attendants who have been trained for their special work. But hospital treatment will not be of permanent utility unless sufficient time has been given to it for a thorough restoration to soundness. The custom of confining an inebriate to a hospital for a single month, or in many cases for several months, fails as a general rule to accomplish the object of the confinement. Not infrequently several years of treatment are needful to repair the damages of many years of indulgence. Statistics of hospital treatment show permanent cures in from one-third to one-half the cases. Incurable cases of alcoholic inebriety should be placed in a hospital for incurables.

No case of drunkenness should be allowed upon the public streets or in a public place. A drunken person is a nuisance and dangerous to the public welfare. Although the habitual drunkard may never have been disorderly, nor in any way disturbed the peace, no foresight can determine how long he will be free from criminal intent; at any moment he is liable to commit an assault or murder. All persons when drunken in public should be arrested and brought before a magistrate for trial. The long-continued and almost universal practice of imposing a fine and committing to jail for a few days should no longer exist. In cases in which no crime has been committed the inebriate should be sent to an inebriate hospital for treatment until he is cured. If a crime has been committed an expert commission of medical men should determine whether the inebriated criminal was responsible for his crime: if responsible he may be incarcerated for a term of years in an institution where he can receive proper treatment for the cure of his inebriety. Every case of alcoholic inebriety brought before a magistrate should be investigated by a medical commission appointed for the purpose and upon its report should be based the magistrate's decision. The records of our own and foreign courts show through many years of trial that punishment has had a very meagre outcome in restoration to health and permanent moral improvement. Such a course of procedure as is adopted in most of our courts is a relic of the dark ages and should be tolerated no longer by an enlightened people. Field says: "The records of the workhouse show that it has no effect to deter men from drinking and one woman was sentenced twenty-eight times in twenty-five months." Dana states that "The number of persons arrested for intoxication in New York city every year is about 30,000: most of these are fined or sent to the Island or both."

In looking over our country I am forced to the conclusion that as citizens and physicians we are doing far too little for the inebriated portion of our population. Since by inhuman laws we permit the sale of alcoholic intoxicants as beverages and thus encourage inebriety, surely we ought to repair so far as possible the damages for which in large measure we are responsible. It has been well said that a government should enact such laws as will make it hard for its citizens to do wrong and easy to do right.

There seems to exist no good reason why both from private and public sources the insane should have larger and more humane provisions than the alcoholic inebriate. The comparatively few private institutions for the cure of inebriety scattered through the country and the less than half a dozen public inebriate hospitals should be supplemented by at least one such hospital maintained by public expense in every State; and, in many States, there should be several. For the reformation and care of their inmates these hospitals should be equipped with all the appliances which the most advanced thought of the age can suggest and money can supply; including a gymnasium, lecture-hall, reading room, and library. With each one should be connected an industrial department and work by every inmate should be compulsory. A military training school may also be a useful adjunct to such an institution. For the superintendence of each should be selected a physician who has made inebriety a special study and has a practical knowledge of the best methods of its cure.

The cost of erecting, equipping, and maintaining such hospitals the State would very soon save in the lessened expense attached to murder, suicide, theft, arson, accident, disease, poverty caused by the inebriate permitted to run at large. To these institutions should be sent all excessive inebriates except such as belong to families that will convert their own homes into private inebriate hospitals. Those inebriates who will not enter a hospital voluntarily should be compelled to do so by the strong arm of the law. The inebriate without estate who is under State care should be supported by State moneys. His family also should have necessary aid from the State during his detention. This method is in vogue in one of the cantons of Switzerland. These establishments should resemble as far as possible well-ordered homes.

The author of this paper does not wish to be understood as condoning the crimes of responsible criminals but as recommending the abandonment of many barbarous methods now in use for the punishment of the alcoholic inebriate, and as advocating a reasonable method of treatment for his reformation and cure in consonance with the enlightened and scientific spirit of these last years of the nineteenth century.

The special thoughts which have forced themselves upon my attention in the study of this subject may be summarized as follows :

The importance of this question is shown by the magnitude of the evils of inebriety and their disastrous effects upon individuals, communities, and the nation.

For the purpose of conserving the public health and of promoting the elevation of the race, the medical profession should take an active and abiding interest in this subject.

The prime factor in the treatment of both the moderate and excessive inebriate is the total abandonment of the drinking habit.

For many reasons the alcoholic inebriate can be treated more successfully in an inebriate hospital properly equipped and wisely managed than in any other place.

Compulsory committal to an inebriate hospital and detention therein until cured should be made lawful for all excessive alcoholic inebriates who will enter such an institution and submit to proper restraint voluntarily.

The prevailing mode of punishing the alcoholic inebriate by fine and incarceration in an ordinary jail or prison should be abandoned.

The cases of all alcoholic inebriates who are arrested and brought before a magistrate should be disposed of in accordance with the report of a medical commission.

The inebriated criminal found responsible for his crime should be confined to an institution where he will receive proper treatment for his disease.

State care and control of the alcoholic inebriate should be the persistent policy of every State in the Union.

The medical profession should make a vigorous protest against placing in a cold, damp cell of a police station, without medical care, those persons who are found on the street in an unconscious or semi-conscious state of drunkenness. Such cases require warm, comfortable quarters and medical attendance.

The alcoholic inebriate will not receive appropriate treatment until the prime workers in the fields of medical science and philanthrophy have recognized him as a defective diseased, dependent, dangerous member of society.

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The New York Medical Missionary Training Institute, conducted by Dr. George D. Dowkontt, in East Forty-fifth street, New York, has been able to purchase a valuable property of twenty acres, formerly the home of the noted car builder, the late John Stephenson. His house or castle is located at New Rochelle, and overlooks the Long Island Sound. The building, 115 by 60 feet, will serve for the housing of seventy students with their teachers. In the near future, if the work prospers as in the past, there will be erected other halls. The price paid was not far from $90,000.—The Journal.

The new hospital car of the Savannah, Florida and Western Railway is illustrated and described in the Columbus Medical Journal. The car has a wide door at the side for the admission of patients ; it is provided with a properly equipped operating room and accommodations for the patients. This road is the first to equip and put into service a hospital car, and Dr. F. H. Caldwell, the surgeon-in-chief of the railroad, is to be congratulated upon causing this first step in the direction of the prompt and efficient care of the sick and injured to be taken.

According to the census of 1890, of every 10,000 deaths in the United States 1 will be from calculus, 35 due to Bright's disease, 40 to fevers other than typhoid, 59 to rheumatism, 70 to scrofula, 130 to cancer, 140 to apoplexy, 148 to whooping cough, 160 to dysentery, 190 to meningitis, 220 to scarlatina, 246 to ague, 250 to convulsions, 310 to typhoid fever, 350 to heart trouble, 480 to diphtheria, 880 to diarrhœa, and 1,420 to phthisis. Of this number 2,210 are from typhoid, diphtheria and phthisis, all of which are preventable, and if we take in whooping cough, dysentery, scarlet fever and diarrhœa, we shall have more than one-third of all deaths at the present time from preventable causes.

A PLEA FOR EFFICIENT LEGISLATION REGULATING MEDICAL PRACTICE.*

BY PERRY H. MILLARD, M.D.

St. Paul.

During the last decade no question in medical sociology has attracted greater attention than medical education. The requirements of our colleges not being upon a par with those of other countries, nor with other departments of education in this country, it was but natural that the profession as a whole, the medical press, and organized bodies of medical men, should join in a demand for needed reforms. During the formative period of our history it is but natural that abuses should have arisen in methods of education and obtain a firm rooting. A spirit of criticism exists that will not subside pending the definite determination of a question of such vital interest to the profession of the country.

The agitation of the question of medical education is bearing fruit, however, in that a majority of the schools situated in the northern States demand at the present time evidence of preliminary fitness before matriculation, and that in a period of five years all colleges known to the writer have extended the period of time of study; with a change of the minimum length of term from five to six months. After the present year every medical school of recognized standing will require attendance upon four courses of lectures in different years, of six months' duration each course, before conferring the degree of M.D. The reforms thus far accomplished have only been secured in the face of determined opposition at the hands of the representatives of the low grade institutions. Future opposition will result in disaster to the participants. Professional sentiment is decidedly with those schools now operating under the advanced curricula. This is particularly manifested by the increased number of matriculates in the last three years at schools operating under the four years' course. The fiscal matriculation of the University of Pennsylvania and Columbia is, approximately, eight hundred, Harvard five hundred, and others in proportion; while that of the recognized low-grade institutions have sensibly fallen off.

Notwithstanding the trend of public opinion, we are firmly of the conviction that our only safety consists in the establishment of efficient legislative acts in substantially every State. The high grade schools are undergoing a period of evolution and are determined to inaugurate greater system in methods of work; with low-grade schools little evidence is at our command pointing to improvement.

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* Read before the American Academy of Medicine at Baltimore, May 6, 1895.

The elevation of the standard of requirements in the latter class of schools have seemingly been entirely in response to the requirements of the respective state boards of medical examiners.

The indifference of the profession to methods of medical education has been far reaching in its pernicious influences. Blinded by our own shortcomings we did not awaken to a realization of our environment until our interests were greatly jeopardized. We found ourselves drifting, in the estimation of both the public and profession, towards a condition of professional inefficiency, not unlike that of French medicine in the seventeenth century, so graphically described by Moliere. One of the greatest evils of our system was the flooding of our ranks with a horde of poorly educated practitioners far in excess of our legitimate demands. The latter assertion is convincingly illustrated by the statistics gleaned from the recent excellent paper of Professor Pepper on Medical Education, affording comparative statistics relating to the proportion of practitioners to the population in different countries of the globe.

TABLE INDICATING PROPORTION OF PHYSICIANS TO THE POPULATION.

Austro-Hungarian Empire	1 to 3,857
Belgium	1 to 2,841
France	1 to 2,666
German Empire	1 to 3,038
Italy	1 to 3,536
Netherlands	1 to 2,484
Norway	1 to 3,961
Russia	1 to 8,551
Spain	1 to 3,375
United States	1 to 500

The number of medical colleges indicates a similar disproportion.

NUMBER OF MEDICAL COLLEGES TO THE POPULATION.

Austro-Hungarian Empire	1 to 5,153,917
Belgium	1 to 1,534,111
Brazil	1 to 7,001,167
Canada	1 to 3,336,877
Chili	1 to 2,887,552
France	1 to 5,477,591
German Empire	1 to 2,471,923
Great Britain	1 to 2,358,767
Italy	1 to 1,445,109

Netherlands	1 to 660,249
Norway	1 to 1,988,771
Sweden	1 to 1,600,917
Russia	1 to 14,403,317
Spain	1 to 1,950.027
United States	1 to 440.151

It will be observed from the above that the proportion of practitioners and the number of schools are greatly in excess of other countries. Medical colleges in foreign countries are likewise independent financially, being, as a rule, directly supported by the State or possessing a direct university connection.

The essentials of efficient medical legislation will incorporate the following features :

1. The adoption of more rigid rules governing the admission of students to medical schools.

2. The determination of the applicant's fitness to practice by an examination upon all the branches of medicine.

3. The right to refuse or revoke licenses for unprofessional or dishonorable conduct.

4. An adequate penalty for violation of the provisions of this variety of legislation.

5. The boards of examiners to be appointed by the Governor, with proportionate representation by different schools of practice. In support of demands for an adequate entrance requirement, it is conceded that medicine is now more nearly practiced from a scientific basis than any time in its history. Without adequate preliminary fitness the broad field cannot be grasped nor its practice entrusted without well trained minds.

Persons contemplating medicine as an avocation should give the scientific branches particular attention in preparation. A thorough course in the scientific department of our better equipped colleges or universities will permit of the successful acocmplishment of the course now provided in the four years' curricula in a period of three years. I fully concur in the position taken by Professor Vaughan, however, in that the classical course does not prepare the student in a manner that he can safely abridge the work now required in the four years' curricula. The necessity of a thorough college training is more apparent now than at any previous time. While an immediate attempt, looking to the demand as above suggested, would probably meet with defeat, I am of the opinion, however, that by concert of action we can secure the adoption at this time of an elevation of the standard of fitness, requiring a college or university matriculation, or its equivalent, of all students wishing to commence the study of medicine. If the student cannot furnish a matriculation ticket from a recognized college or university, he or she should be required to undergo an examination that would admit to such course.

Under existing relations we cannot safely entrust this examination to the representatives of the teaching body. Except in a few of our high grade schools the entrance examination has been a farce as at present conducted. The factors leading to this condition are the same as outlined earlier in this paper. It is the result of college competition with an unnecessary multiplication, in recent years, of the number of teaching bodies. It is my judgment, based upon a somewhat varied and extended experience, that a majority of the schools in this country exist to serve the personal interests of the respective factulties rather than to serve the legitimate demands of the people. About twenty-five per cent. of our schools have a matriculation of less than sixty pupils.

The determination of the fitness of the student to commence the study of medicine should be placed in the hands of a body of men entirely disinterested. I know of no body better qualified to superintend the execution of this important trust than a state board of medical examiners. If not such a body then a committee composed of members of a faculty of a college or university.

The minimum of entrance requirements should be uniform between the different tates. Under the operations of the New York law regulating the examination of students commencing the study of medicine, much good is being accomplished. I desire to urge upon the profession the necessity of provisions in future acts looking to a rigid protection of the gateway to the study of medicine.

Having determined upon the fitness of the school to afford satisfactory courses of medical instruction, applicants holding degrees from such institutions should be admitted and a further test of fitness demanded by requiring an examination upon all the recognized branches of medicine. These examinations should be conducted by number, be scientific, and of sufficient severity to assure the public a thoroughly educated profession. Students from the respective schools of practice should undergo an examination upon the same questions, no necessity existing for questions not primary in character.

Licenses should not be refused or revoked for other than gross unprofessional or dishonorable conduct. In criminal cases it is not well to anticipate the processes of criminal law. The later feature of our legislation has been instrumental in protecting the people from the professional charlatan in several states. Its provisions should be incorporated in all statutes regulating medical practice.

Owing to the difficulty in securing indictments and the consequent tardiness of legal processes the penalty for violations of the provisions of this form of legislation should be by penalties imposed by a justice or a municipal judge; the latter method has given satisfacton as far as I am aware. Reasonable efficiency upon the part of the officers of these boards have been awarded by a full compliance with the provisions of this form of statute in all instances. The Governor should have the appointing power, being responsible for the successful operations of the different States boards. Experience satisfies us that the so-called mixed boards are doing satisfactory work and operating in perfect harmony. Seemingly no excuse exists for the duplicate boards operating in a very few States. At present approximately thirty States possess legislation regulating medical practice. Seventeen States have a form of statute that fails to recognize the diploma as evidence of fitness to practice; consequently they may be classed with those States operating under efficient acts. In the latter class of States I particularly desire to call your attention to the results of work thus far accomplished. In a paper read before this learned body, at Detroit, Michigan, in 1892 I suggested the future influences of these boards as most important in shaping the future medical education of this country. I submit data at this time confirmatory of the position then taken and reaffirm my former suggestion that future legislation will in a great measure determine and govern the work of the teaching bodies of the country.

Data have been obtained from the following named States: Alabama, Minnesota, Maryland, North Dakota, North Carolina, New York, New Jersey, Virginia, and Washington.

The subjoined table indicates briefly the work of these boards:

State.	Examined.	Licensed.	Rejected.	Per cent.
Alabama	647	558	89	0.862
Maryland	150	105	25	0.8 6
Minnesota	641	499	142	0.778
New York	967	797	170	0.824
New Jersey	447	417	30	0.955
North Carolina	615	508	207	0.71
North Dakota	81	76	5	0.938
Virginia	835	613	222	0.734
Washington	207	167	40	0.806
Totals	4670	3740	930	0.822

It will be observed that of four thousand six hundred and seventy persons examined but eighty-two and two-tenths per cent. were successful in securing a license. The nine hundred and thirty unsuccessful applicants have, we doubt not, principally located in States not protected by this form of legislation.

I am pleased to direct your attention to the good work of the Minnesota board. The first act regulating medical practice in this State became operative in March, 1883. It was the form of legislation at present in force in Illinois. It was in operation five years, being supplanted by the present law. The present act requires an examination of all persons commencing the practice of mdicine and as amended by the last legislature, the minimum of requirements is changed, demanding that all graduates of later date than 1898, furnish satisfactory evidence of having attended at least four courses of lectures in different years, of not less than six months duration each.

We have in Minnesota a practical illustration of the position taken in my former paper: "that in medical legislation we have the only solution of the problem of higher medical education." Having drafted these bills and by force of circumstances been somewhat conspicuously aggressive in urging their enactment, I have, in consequence, witnessed their operations with some concern and interest. The result is all that the most sanguine could have anticipated. In a period of twelve years the proportion of physicians to the population in Minnesota has been reduced from one practitioner to every six hundred and fifty in 1883 to one to every one thousand in 1895. The State has been substantially rid of the traveling charlatan. The present able Secretary, Dr. McDavitt, informs me that the medical census just completed is accurate and that the present operation of the law is quite faultless.

The work of the New York board is attracting considerable attention. Notwithstanding pronounced opposition and many embarrassments the act is destined to strengthen the character of the profession in this State. From advance sheets kindly furnished for use in the paper, I observe the following verification of a position taken by the secretary, James Russell Parsons, in his 1893 report. He reiterates that the records of the past year conclusively prove the position taken in his 1893 report, "That the new law proves a barrier to the ingress of the incompetent, has operated to raise the standard of preliminary education, improve the methods of teaching and terms of study of the different schools of medicine."

The following resolution from the president and secretary of the board to the State Medical Society is significant and should meet the approval and support of every member of the profession of this great State, "Resolved, That in the opinion of this board the best interests of the public and medical profession would be materially advanced by gradually increasing the minimum of requirements as to general preliminary education till no candidate be entitled to matriculate in 1897 at a degree-granting medical school in this State, that has not completed at least a full high school course."

I am pleased to note that this bill has already passed the senate in New York and is in a fair way of becoming a law. If it becomes operative it will operate to improve the character of matriculates in New York schools and will be followed by similar legislation in other States. Greater co-operation is necessary between different State boards, as it is essential that harmony of policy exist as far as practicable. As in foreign countries their relations to the professional and teaching bodies is most important, their functions being that of professional censors of the conduct of the members of the profession, and guarding at the same time the avenues of entrance to professional work. It being the duties of these boards to protect the people from professional incompetency and charlatanry the duties are briefly comprehended in the performance of the following duties: 1. In establishing a minimum curriculum for all colleges whose alumni apply for a license to practice. 2. The individual examination of all persons wishing to practice medicine in the commonwealth. 3. A professional censorship, granting the right to refuse or revoke a license for incompetency and gross unprofessional or dishonorable conduct.

A school doing honest work has little to fear at the hands of these boards; upon the contrary, as suggested in my former paper, it will be found that the proportion of applicants able to pass successful examinations will be a certain index of the character of instruction afforded students in the respective schools. While the proportion of applicants successful is only eighty-two per cent., it will be found that from the schools heretofore operating under a high grade of requirements, that thus far at least in the work of these boards, nearly all graduates are successful in obtaining a license upon examination.

I cannot but conclude that efficient medical legislation will operate to bring about the following results, as applied to the profession and public:

1. It will protect the people by affording a profession of greater intelligence.

2. It will suppress charlatanry.

3. It will reduce the number of persons practicing medicine to a number commensurate with the demands of the people.

4. It will reduce the number of medical colleges, at present far above legitimate demands.

5. It will raise the general standard of professional fitness, assuring us a professional prestige in the future, becoming the most important of the learned professions.

In conclusion, we appeal to the profession to renew their efforts in securing efficient medical legislation, believing its operations will result most beneficially to both the public and profession.

SUCCESSFUL TREATMENT OF DIPHTHERIA WITH ANTITOXIN.

BY LOUIS HOUCK, M.D.,

St. Louis.

Harry S., aged seven years, was taken ill with fever and sore throat on May 15th. On the 16th a slight cough and running at the nose was noticed and increased fever anorexia and inclination to sleep. Patient first seen at 8.30 P. M. on the 16th. Tonsils were well covered with membrane, cough loose and rattling but not croupy, discharge from nose muco-pus, odor from mouth characteristic. Ordered calomel $\frac{1}{2}$ grain every two hours till it operated; throat to be swabbed every two hours with pure peroxide of hydrogen. The next morning the membrane had extended to uvula and soft palate. A patch the size of a dime on either side of the soft palate made the diagnosis of diphtheria absolutely certain. The bowels having moved freely the calomel was discontinued.

Ten c. c. (1000 units) of Mulford's Antitoxin were injected. Local treatment was continued and chlorate of potash and tincture of iron mixture was ordered.

May 18th, patient rested well, general condition much improved, fever very slight, membranes had not spread and a red line could be plainly seen about margins. Continued general treatment and gave another injection of 10 c. c. (1000 units) Mulford's Antitoxin.

May 19th, membrane on palate gone leaving two large ulcers; uvula clean. In swabbing the throat the membrane came away with swab, leaving a red surface studded with yellow spots. Ordered a gargle of thymol, potash, alcohol, glycerine, and water.

May 20th, continued treatment and touched ulcers with caustic solution.

May 22nd, throat healed. Patient feels well, has good appetite and was up and dressed. Had him returned to bed with instructions to keep him there for two days longer.

May 24th, patient up and playing; feeling well and eating heartily; discharged.

This was a severe case of diphtheria in a child of delicate constitution and very emaciated. I feel certain that this case would have ended fatally or at best been a long and tedious one. I have used antitoxin in eleven cases with equally good results. In two cases complicated with croup I performed intubation on my first visit, and then injected the antitoxin. In one case the tube was removed in three days; in the other in four days, both cases recovering. Previous to the use of antitoxin I have had to allow the tube to remain in for from six to fourteen days.

SELECTIONS.

THE METHOD OF MAKING AUTOPSIES AND THEIR PROPER INTERPRETATION.

BY MINOR MORRIS, M.D.

Method is just as essential in the making of autopsies as it is in major surgery, where complete mastery of detail and technique is indispensable. Method secures accuracy of observation, economy of time, thoroughness of operation, and reliable results.

The principle which should govern any special method is to obtain as far as possible an inspection of the various organs in their normal relations. In accordance with this rule we open the abdomen first for inspection, but dissect it after the thorax. Were the abdomen dissected first, the attachments of the diaphragm would be cut, thus disturbing the visceral relations; and severing the large vessels would empty the chambers of the heart, giving us wrong impressions of its condition.

The autopsy naturally begins by an inspection and external examination of the body, with reference to various medico-legal points. When the examination is made some time after death, the differentiation of injuries from post-mortem changes in the skin is not easy; and large interests, as in accident and life insurance, may depend upon the proper interpretation of such small points.

The method of making incisions may seem a small matter, but every one knows how an awkward operator can consume time and mutilate parts when a few well-directed strokes of the knife would clear the abdomen or thorax of any or all the organs. The solid organs should be incised so as to expose their whole surface in a given plane. The kidney is divided from its convex border through the pelvis, the lungs from apex to base, the liver and spleen in their long axis. In this method we have a comparative view of the different structures of the organs.

The heart and lungs can be examined in situ, but usually I prefer to sever the trachea, into which I insert a finger, and by traction and a few cuts remove lungs and heart together.

The chambers of the heart can now be examined by opening along the right and left borders. If, in obscure cases, death has resulted from asphyxia or paralysis, the right and left ventricles will be respectively overfilled. The organ being now cleared of its attachments, the integrity of the valves can be tested by allowing water to flow into the aorta and pulmonary artery, by which the organ should be suspended. If the water slowly drains away, it is due to filling up of the coronary arteries.

The proper interpretation of valvular conditions is not always easy. We may have grave lesions and no insufficiency, while this may exist from disease of the heart muscle and not be recognized at the autopsy. It is in these conditions that the meaningless diagnosis of heart failure is made, when careful work would usually clear up the case. In opening up the valves with the scissors, care must be taken to draw aside the pulmonary artery, which would otherwise be divided by cutting out from left ventricle through the aorta.

The examination of the abdominal viscera is best done in the order of their presentation, and by following a certain routine the operator becomes expert and not liable to overlook anything.

The omentum and spleen would naturally come first. The urinary organs should be taken consecutively, beginning at the kidneys, then the genitalia and rectum; the digestive organs first met with are the stomach and duodendum, which are best opened in situ by one incision, following which the neighboring liver, pancreas, and mesentery can be investigated. For the sake of cleanliness the intestines are left to the last.

The proper interpretation of the conditions found in the viscera requires the broadest knowledge of medicine. To only discover a lesion is a small task, but its histological history and its primary and secondary influence on the organism are problems to test the pathologist's resources. To determine how far a cirrhosis present in the liver is primarily or secondarily a part of the general process of interstitial nephritis is perplexing; or in case of a disorganized spleen with caseous areas in one apex, it will be hard to say how much was post-mortem change, and how far it was a factor in producing death.

The removal of the skull-cap can be done by the circular method of sawing off the calvarium, or, what is easier and quicker, to cut out an elliptical piece from the vortex, beginning at the ears and going with the saw anteriorly and posteriorly to the site of the fontanelles. This does not disturb the tissues of the face, which recommends it for private cases.

The brain can be dissected either by first opening the lateral ventricles and then making concentric long incisions, laying open the brain like the leaves of a book; or horizontal sections can be made with a broad knife from convexity to base, which admirably exposes the region of the internal capsule, where minute hemorrhages are oftenest looked for.

The brain should be minutely subdivided, for the reason that a small lesion, sufficient to cause profound disturbance or even death, might, otherwise, be readily overlooked. The interpretation of pathological findings will be materially aided by a good clinical history. This is no reflection on the resources of pathology, for many diseases may run a fatal course and leave no clew as to their existence save as chronicled in the clinical history. I have seen expert pathologists at a loss to account for death when the clinical history cleared up the case.

What is the attitude of physicians as a body towards pathological investigation? It is not exaggeration to say that there is a lamentable indifference on the subject. The busy practitioner says he has no time for making autopsies, and thus correct or prove his diagnoses. It is doubtless often more comfortable not to have an autopsy. The dead-room is the physician's Nemesis. It reminds him that snap diagnosis and superficial examination bring surprises and humiliation. There is nothing like the autopsy to teach men charity for their fellow-practitioners. In teaching us our errors it teaches us our best lessons.

The large place pathology has come to occupy in our schools is sufficient evidence of its recognized value to the physician. I doubt if there is a better criterion by which to estimate a physician than his method of conducting an autopsy, and the interpretation of its conditions. The guiding principle in medical education is that if disease is to be treated intelligently its histological basis must be clearly understood. If our physicians are to take interest in pathology they must do pathology as students with the opportunity of making autopsies. The holding of autopsies is also an educating influence with the public and should always be encouraged. It tends to remove prejudice, besides contributing to the interest of a physician's work and to his medical knowledge.

Pathological principles decide the amputation of a limb, the prediction of life's duration, or the adoption of intelligent treatment. Their thorough understanding is indispensable. It need not be argued that success does not depend upon our pathological knowledge, and that people care nothing for the scientific value of their ailments as long as the doctor gets them well. Let us not lose sight of the great advancing principles of our craft in the race for success in the practice of medicine. Many a physician scores a great success in practice whose pathology is a mystery; but this is not the rule, for it logically follows that he who understands disease best will treat it best. The treatment of the patient and the treatment of his disease are based upon two widely different philosophies.

The work of making better pathologists of our physicians begins with the student, and when he is sent out competent to make pathological examinations and properly interpret them, then we shall have attained one of the aims of progressive medicine.—Int. Med. Magazine.

LEGIBLE HANDWRITING.

"A damn'd cramp piece of penmanship, as ever I saw in my life. I can read your print hand very well. But here there are such handles, shanks and dashes that one can scarce tell the head from the tail. . . . It is very odd I can read the outside of my letters where my own name is well enough. But when I come to open it, it's all—buz. That's hard, very hard; for the inside of the letter is always the cream of the correspondence."—She Stoops to Conquer.

We sincerely hope that none of our readers will regard this particular quotation as personal, but we are warned by experience that it is extremely easy to give offense where none was intended, and therefore we premise that the reflections are directed solely to those who write for the scientific press generally and for the dispensing pharmacist as a daily occupation. We sometimes imagine, as we now and then caught a glimpse of a manuscript (in the office of some other medical journal) that we were fast returning to the customs anterior to the days of Cadmus and Europa, when men wrote their epistles in hieroglyphics, with thick ink.

Ideographism represents a picture of the object the idea of which is to be conveyed, or a symbol which by consent represents the object. This differs from Phonetism, which seeks by arbitrary letters to represent the sounds of a spoken language, and which in conveyance of the idea leaves less to the imagination.

It is therefore somewhat in the nature of an appeal (in behalf of the management of other journals) that the ideograph be relegated to the Egyptologists along with the bones of the antediluvians who used pictures instead of writing when they wished to convey either instruction, sentiment or emotion to their fellow men. When we attempt to read an article written in hieroglyphics we are much embarrassed, for we think of many things a given hieroglyph may represent, and if the author is a plain, matter-of-fact scientist, he may become angry when he is represented in clear but modern type as saying something quite different from what he would have said, had he used the more common characters of the alphabet. A lively imagination, then, in the translation of hieroglyphs, is to be held severely in check, if either the peace of mind of the translator or the choler of the author are considered.

When the unimaginative drug clerk attempts the compounding of a prescription written in hieroglyph, there is little trouble, for as he is a man of one idea he fills the prescription on that basis, but as there is many a "mute inglorious Milton" engaged in ordinary pursuits, so the prescription writer in hieroglyph may find to his sorrow, when the medicine is delivered, that he has to administer a witches' broth as hot as the good Dominie Sampson was forced to swallow from the ladle of Meg Merrilies, or a poison as potent as those used in the days of De Medici.

Even more unfortunate are those extremely busy men who, although using the characters of the common alphabet when writing an article, forget to add a part of the letter, or the last part or syllable of a word; for the hieroglyph did mean something if one only knew what it was, whereas the blank represents only vacancy—mere space—which may be filled by anything.

It is not necessary in conveyance of ideas by writing, that one be artistic, although to their credit be it said that there are many physicians whose handwriting is beautiful in its clearness, graceful curves and delicate tracery; but careful and close adherence to the accepted forms of the letters, will, in the long run, be the surest way to prevent misunderstanding and accidents, and if by nature one can not acquire the necessary handicraft, he should use the typewriting machine or employ some one to use it in the translation of his manuscript.

We are moved to this excursus apart from the field of medicine, by the reception of an extremely ill-natured anonymous communication reflecting upon the manner of a foot note appended to the letter of a valued correspondent. In that foot note we pointed a moral really addressed to the whole medical division of the great Republic of Letters.—Ed. Jour. Am. Med. Asso.

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The Medical Review and Love's Mirror are still keeping up their warfare. To the outsider it appears as though the brethren in St. Louis do not live in unity and harmony with each other. We would suggest the introduction of an evangelist for that benighted region, as we believe from reports he would have a large field for active service.—Columbus Med. Jour.

ABSTRACTS.

Internal Hemorrhoids.

Dundore (Mathews's Medical Quarterly) after an exhaustive paper on this subject, concludes as follows:

1. The ligature is the safest method of operating for internal hemorrhoids, as there is less likelihood of its use being followed by hemorrhage, stricture, or ulcers.

2. The clamp and cautery cause less pain, shorter convalescence, and are less likely to be followed by retention of urine than when the ligature is used; but hemorrhage and stricture of the rectum may very often follow their improper application.

3. The practice of Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hemorrhoids it should never be used, as it is liable to be followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

4. Simple dilation of the sphincter, injection of carbolic acid, and Manley's method are simple palliatives, and their use is very limited.

5. There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case.

Growing Pains.

Growing pains, defined as pains in the limbs caused by and during rapid growth and sometimes so severe as to give rise to growing fever, have been diagnosed by the author less and less frequently as the years rolled by, until the vanishing point was reached. Cases which have been classed together under this name are the following:

Myalgia from Fatigue.—This is the commonest variety, usually about the knees and ankles after unusual exertion. They are probably due to autoinfection brought about by excessive production of effete materials in the blood and their inefficient elimination. Elevating the limbs and rubbing with the palm of the hand in the direction toward the heart, relieving venous stasis and facilitating a supply of healthy blood to the exhausted muscles, promptly relieves the pain.

Rheumatism.—This is second, if not first, in frequency. There is slight pain in the joints, little or no swelling, and very mild fever, and hence the true cause is not recognized; but rheumatic endocarditis frequently develops in these cases.

Diseases of Joints and Bones of the Lower Extremeties.—Cases of hip-joint disease and suppurative epiphysitis of the upper end of the fibula, diagnosed by the laity and allowed to go on untreated, are related under this heading.

Fevers, accompanied by pains in the limbs, in one instance proving to be inception of typhoid fever, constitute this class.

Adenitis.—Here, again, the mother still supposes that the lad of sixteen years suffered from "growing pains," but he was treated for gonorrhœa and a sympathetic bubo.

The malady "growing pains," with its frequent concomitant growing fever, like its congener disorders of dentition, as a separate morbid entity exists principally as an article of faith. The complaint still maintains, however, a strong hold of the lay mind, and forms an extremely common lay diagnosis which is often the cause of much suffering, and even death, by leading to the neglect of curative measures at a time when they are most effective.—P. B. Bennie in Arch. Pediatrics.

Excision of the Knee.

Dr. A. Morgan Vance in reporting seven cases in which he had excised a knee for the relief of crippling from infantile paralysis, the author draws attention to two that were fatal and almost precisely similar.

In the first, aged seventeen, for five days after a double excision the condition was good, with no evidence of any complications ; then the heart's action became very rapid, and on different parts of the body an extensive eruption occurred resembling urticaria, the wheals being very large, universally crescentic in shape, and raised fully one-half inch above the surface. There was little or no fever until just before death ; examination of the wounds showed no inflammatory action, and the parts around them were free from eruption. There was no pus present, but a large quantity of oily substance or fat exuded when the wounds were reopened. No further examination was allowed.

The second case, aged fifteen, died with exactly similar symptoms, and at the same period after the operation. The strictest aseptic precautions were observed in both these cases.

He concludes : (1) That the danger in these operations is in proportion to the age of the patient, and consequently the degree of fatty degeneration present. (2) That both these deaths were due to fatty emboli or the absorption of some non-septic material into the blood, which caused the fatal heart-complication. (3) That, though the younger cases may be subjected to this procedure with every hope of success, both as to function of the stiffened limb and as to life, the rule does not hold good in the older cases,—say, after ten or twelve years of age.—Int. Med. Mag.

Alcohol Not Alone a Cause of Inebriety.

Dr. Crothers, editor of the American Journal of Inebriety, superintendent of the Walnut Lodge Hospital, Hartford, Conn., in a paper before the American Medical Association, remarks:

The statement, so often repeated, that inebriety is the result exclusively of alcohol, is not true. Careful studies of individual cases indicate a great variety of complex causes which are unrecognized in most cases. Inebriety is a symptom in many instances, which disappears when certain causes are removed. In certain cases, the ejection of a tapeworm has been followed by total abstinence of the person. The removal of a spicula of bone pressing on a nerve ; the trephining of the skull ; the operation for and removal of a stricture ; the curing of hemorrhoids ; constipation ; diarrhœa, and many other conditions, have been followed by recovery from inebriety. Conditions of exhaustion, anæmia, poisoning from malaria, and degenerations following acute disease, frequently break out in continuous drinking, which subside when these states are removed.

It is also true that alcohol, taken any length of time will produce degenerations which demand its continuous use. A single excessive use is often followed by a craze for spirits that is a literal inebriety. From a degenerative soil inebriety grows most luxuriantly, and the previous degenerations are intensified to an unknown degree. Sanitary conditions are always influential, and in many cases exercise a marked power over the intensity and duration of the case. Experience shows that a certain number of cases of inebriety recover, from a change of surroundings and living. I have described in Volume iv., Journal of Inebriety four cases of persons who always drank near the sea coast, but who had no desire for spirits and did not drink when living in mountain regions. Change of occupation has frequently been followed by complete restoration from inebriety. What conditions and influences in the person and his surroundings exist in such cases are at present unknown.

The influence of poisoned air is seen in many ways by all observers. How far it may be an exciting or predisposing cause in disease is not always clear. In certain cases very marked results follow the improvement of aeration.—Am. Med. Assoc. Jour.

Hemorrhage in a New-Born Infant.

Dr. L. Emmett Holt, in the Archives of Pediatrics for June, reports an extreme case of hemorrhage which was first noticed on the evening of the second day. The hemorrhages rapidly increased in number and size and were at their height on the fifth day. The whole left arm was black and blue. About a dozen areas of ecchymoses of various sizes appeared on the right arm and elbow and on the hand. There were also areas of ecchymoses on the ankles and other extensive areas upon the chest, one of these being as large as a man's hand. Hemorrhage occurred into the cord, between the body and the point of ligature, causing it to stand out like a round black ball one and one-half inches in diameter. There was no bleeding from the mouth, nose, eyes, kidneys, or bowels. From this time there was steady improvement and at the end of two weeks there was but slight discoloration in places. The cord fell on the fourteenth day without hemorrhage. Such cases clearly show that the cause, whatever it is, is a transient one. If the child is vigorous in other regards the chances of recovery are good. Treatment seems to have but little influence upon these cases, the most important thing being attention to nutrition.

Puerperal Sepsis.

Dr. William Warren Potter, in discussing this subject (Buffalo Medical and Surgical Reporter) offers the following conclusions:

1. Obstetric engagements once accepted should be faithfully fulfilled, no matter how awkwardly they fit. Apply the same rule of cleanliness to rich and poor alike. Decline service when this cannot be done. Human life is too precious to jeopardize it by slipshod, half-hearted, or indifferent service.

2. The physician should be a model of cleanliness in body and clothing, and should insist upon the observance of similar conditions by all persons in and about the lying-in chamber.

3. The delivery room, whether in hovel or palace, court, alley, or avenue, should be simple in its furniture and hangings, and be cleaned with soap, water, and whitewash (if possible to use the latter) immediately before occupancy by the puerpera.

4. The delivery bed should consist of a new tick, filled with sweet and clean straw, covered with a blanket, impervious dressing, and a folded sheet, with other clean covering to be allowed, according to season. Exceptions to this simple bed should be as few as possible, and in no event should a bed be substituted that has been used by the sick, or that is not beyond even a suspicion of infection.

5. The patient should be specially prepared for delivery by baths

and enemata, vaginal douches, and clean clothing; and labor should be conducted on the lines of absolute cleanliness, with a few digital examinations, and a complete delivery of the secundines.

6. Legions of the genital tract should receive careful attention: rents of the perineum should be repaired, and so, too, in some instances, should tears of the cervix.

7. Antiseptic solutions containing a germicide should be used for cleaning the hands and instruments of the operator. Intra-uterine irrigation with sterilized water should be carefully employed after operative midwifery, either manual or instrumental.

8. Finally, if sepsis proceed to suppuration and abscess, the abdomen should be opened, pus cavities emptied, irrigation used, and drainage established. If the uterus and adnexa become thoroughly infected, they should be extirpated.

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The New York Academy of Medicine owns a half million of assets; a valuable library; has 774 fellows, and a self-supporting department of nurses. The current expenses amount to $17,000 per annum, not including the purchase of books.

Dr Jacobi says that more than half of the patients of every practitioner are infants and children, yet it was not until 1860 that their diseases were taught in a thorough and special way; not until 1870 did the larger medical schools give clinical instructions in this branch.

A bill has been introduced in the Minnesota legislature, by Dr. Zier, requiring those who manufacture patent medicines and nostrums to publish their formula on each bottle, box, or package. The measure is a just one and has received the indorsement of many physicians and pharmacists of the State.

At Liberty, N. Y., there will soon be built a new rural retreat for consumptives, for which purpose $20,000 has been contributed by Mr. J. Pierpont Morgan. The location has a high reputation for salubrity and attractiveness. Its easy accessibility to a large population, needing a sanitary retreat less remote from the metropolitan district than are the Adirondacks, will tend to build it up even more rapidly than that on the Saranac.

BACTERIOLOGY.

Vitality of the Typhoid Bacillus.

According to Uffelmann (Centralbl f. Bakt.) typhoid bacilli resist drying for a long time. From his investigations he concludes that these micro-organisms retain their vitality in a dry state for many days—in ordinary earth, twenty-one days; in street sweepings, thirty days or more; in sand, eighty-two days; on wood, thirty-two days and on linen over sixty days. In moist media it is very probable that the microbes would retain their power of growth still longer. The same investigator proves that typhoid bacilli may be carried by the air as well as by the clothing, and that they are thus capable of infecting milk, water and various food stuffs.

Disinfection of Tubercle-Infected Houses.

Drs. Delepine and Ransome after careful study of the various methods of disinfection and the effects of various agents on the virulence of the tubercle bacillus, conclude thus :

1. The disinfection of rooms which have been contaminated with tuberculous products cannot be obtained by means of the fumigation methods generally used at present. Sulphurous acid, and chlorine, as used under supervision by expreienced municipal disinfectors, have proved practically useless.

2. The only other method of disinfection which seems to promise more satisfactory results is the direct application of a solution of chlorinated lime to the walls to be disinfected. This method has so far given satisfactory results, but is attended with discomfort on the part of those who have to carry out the disinfection.

3. Light is, in the case of the tubercle bacillus, the most important natural disinfecting agent.—Brit. Med. Jour.

The Transmission of Typhoid Fever.

The recent agitation upon the subject of the transmission of typhoid fever through oysters has raised the point of even greater danger of transmitting various infectious diseases through vegetables, such as water-cress, lettuce, and the like. Water-cress more particularly, it has been pointed out, is grown for the most part in beds where it is in contact with the water of rivers and streams that have doubtless often been contaminated with sewage, or it may flourish in a wild state and often in stagnant and unwholesome ponds and ditches. Cases are also on record in which typhoid fever was believed to be transmitted by the use of contaminated vegetables, but the evidence is unsupported by bacteriologic examination. In the Edinburgh Free Library great care is taken to prevent contagion by books. Daily reports from the health office of infectious diseases are made to the library and the books are refused when infection is feared, and books which have been in infected houses are burned.—Pop. Health Mag.—Med. News.

Cheese a Carrier of Disease.

Not only is cheese liable to be poisonous by the development of tyrotoxicon, but it may prove to be a carrier of disease germs. Dr. Beebe, Assistant Chemist of the Board of Health in New York city, recently found the true bacillus of diphtheria in a lot of suspected cheese, and as the result of this discovery a large quantity of cheese was seized and destroyed.

It is said that there were several fatal cases of diphtheria in the family of a farmer who supplied much of the milk from which the cheese was made, and the germs conveyed by the milk from this infected house lived through the process of cheese-making, and communicated the disease to several who ate the cheese.

It has been known for a long time that milk was an excellent medium for the growth of bacteria, and therefore, of course, for the taking up of any infection and the spread of the same. No doubt many serious illnesses or diseases have been caused in this way, though traced supposedly to other sources.

The day is soon coming when no one will think of using milk without first pasteurizing or sterilizing it.—N. E. Kitchen Magazine.

Influence of Coffee on Disease Germs.

This subject has been investigated by the Russian bacteriologist, Proteorowski, who arrives at the following conclusions (New York Med. Times):

1. An infusion of coffee, when taken either as a beverage in the ordinary way, or with meat bouillon, undoubtedly acts as a disenfectant.

2. The disinfecting properties of coffee depend on the formation of certain constituents during the process of roasting; also on the tannic acid which it always contains.

3. The germicidal efficacy (such as it is) of acorn-coffee, rice-coffee, etc., is likewise developed by roasting.

4. An infusion of coffee or one of its substitutes, made with water only, is a much better disinfectant than another of the same strength but mixed with meat bouillon.

5. A pure watery infusion of coffee of the usual strength kills the bacilli of cholera within three hours, typhus bacilli in one day, and the spores of the Siberian plague within nine days. Coffee substitutes, in like infusions, destroy the two former species of germs, but not those of the plague.

Phagocytosis.

Sanarelli (Ann. de l'Inst. Pasteur) gives an account of the means by which the organism is defended against the microbes. He studied the varied kinds and selects the life history of vaccinia as revealing the details of general immunity best. At the outset he shows that this immunity can not be due to any bactericidal property, to any attenuating power, nor yet to any antitoxic power possessed by the body fluids of the vaccinated animal, for he finds that the serum of vaccinated animals possesses no bactericidal power, as maintained by Behring and Nissen, and the microbes grown in such serum increase rather than diminish in virulence. Further, the serum of vaccinated animals possesses no antitoxic properties; microbes developing in such serum actually produce more active toxins than when they are grown in ordinary nutrient media. Having eliminated these three possible causes of vaccinal immunity, he proceeds to show that the preventive and therapeutic properties of this serum depend upon the power possessed by it of causing active phagocytosis. The microbes are ingulfed by phagocytes, and inclosed in these they retain their vitality for a considerable time. He believes that, although remaining alive at the seat of inoculation, these microbes produce no toxins after being inclosed in the phagocytes, for the blood-serum of such animals is not capable of destroying the toxins if they were elaborated. He finds that marked leucocytosis occurs in vaccinated animals, and in those treated by therapeutic serum, but the leucocytes undergo a most remarkable diminution in other cases. This he connects with the chemiotactic relations between the serum and the phagocytes. Preventive serum does not influence the diseased organism to any action on the bacteria, but by stimulating the proper cells to activity, thereby causing a concourse of phagocytes at the seat of inoculation. When this concourse of phagocytes is prevented, as by exposure to cold, the preventive serum has no effect and death results.—N. Y. Polyclinic.

THERAPEUTICS.

Lycetol.

In the treatment of chronic gout and rheumatism the alkalies, especially the compounds of lithium, have long been esteemed among our most valued remedies. It is for this reason that after the pronounced properties of piperazine as a uric acid solvent and anti-arthritic had been established, efforts were made to combine this substance with one of the vegetable acids, which as is well known, became changed into carbonates in the blood and increased its alkalinity of this fluid, as well as of the other secretions. The outcome of these experiments is Lycetol, which is the tartrate of dimethylpiperazine, combining the alkaline and uric solvent powers of piperazine and tartaric acid. With regard to the therapeutics of the new remedy the editor of the Chicago Medical Recorder, writes as follows: Lycetol acts as a diuretic and also decreases the specific gravity of the urine by preventing the formation of an excess of urea. It retards the formation of uric acid, and is of much benefit in rheumatism.

Peroxide of Hydrogen.

In an article on the real value of the medicinal Peroxide of Hydrogen preparations found in the market published in Gaillard's Medical Journal for February, the following paragraph occurs:—"Sample No. 14 comes next to sample No. 5, but it is readily seen that the degree of acidity is entirely too large for a preparation which is to be applied to the most sensitive diseased mucous membranes." Mr. E. R. Squibb writes regarding this, that it has accidentally escaped the attention of the author that by the label, and by a paper published in the Ephemeris this solution is protected against rapid decomposition by the addition of 1 p. c. of boroglyceride, and that the boroglyceride reacts as free acid when tested with normal soda solution. Therefore, the degree of free acidity, which he condemns, is apparent only, and comes from boric acid, which is not an irritant to mucous surfaces, but is an active antiseptic and bactericide, and was selected for protecting the solution from decomposition because it was non-irritant and was medicinal and remedial in exactly the same way as the solution of hydrogen dioxide which it was used to protect. It is useful to remember that the officinal strength required by the U. S. Pharmacopoeia is 10 volumes, and that in order that a commercial article should reach the physician who uses it of that strength it should be put up to a strength of about 12 volumes.

Cases Treated by Bromide of Gold.

Dr. Wade reports the following cases:

The first case was that of Mrs. A., aged 40, American, the mother of three children. She suffered from an aggravated form of chronic eczema, covering the entire scalp, and chest. while there were large patches of the disease all over the body, back, arms and legs. There was a history of scrofula on her father's side. On November 3, 1894, I placed her on mercauro. Of this I gave her five drops in water after meals three times a day. For external application used a simple soothing ointment which was soon dropped. It was two weeks before improvement commenced, but from that time the progress toward entire recovery was slow but sure. The treatment was stopped April 13, 1895.

The second case was one of chronic eczema in Mr. B., aged 35, American, who consulted me January 3, 1895. He had been under treatment for seven or eight years for eczema of the scrotum, anus, perineum and pubes. I put him on arsenauro, five drops in water, which was increased to eight drops. The improvement was visible within a week and in two months he was entirely well and has remained so.

The third case was that of Mr. R., aged 27, Irish, who had pustular syphilide. The eruption was well marked all over the face and shoulders. Mercauro was used in five-drop doses, and the result was at once apparent, while the manifestations of the disease soon disappeared.

The fourth case was that of Mr. W., aged 24, American, who came to me with syphilitic ulcer of the upper lip. He gave history of syphilitic infection three years before. At the time I first saw him the ulcer involved over one-half of the lip, bleeding freely, cracking on the slightest provocation and making his life miserable. Put him on mercauro 10 drops after meals, and continued it steadily for six months. He improved at once and in three weeks the ulcer was entirely gone.—New Eng. Med. Monthly.

Somatose.

The considerations which influence the physicians in the selection of a food preparation for the sick are chiefly, whether it is nutritious, in the true sense of the word, containing in small bulk a large amount of available nutriment, whether it is (digestible, without taxing the gastro-intestinal tract, whether it is promptly absorbed and assimilated, and finally whether it is palatable and suitable for prolonged administration. Experiments have shown that Somatose is emmenty adapted for the nutrition of persons suffering from debilitating diseases of acute and chronic character, such as typhoid fever, pneumonia, phthisis, gastric affections, and for the alimentation of weakly children and convalescents. It consists almost entirely of the albumoses or active nutrient constituents of meat, and is digestible, rapidly assimilated and relished by even the most fastidious. In view of the large amount of condensed and available nutriment it contains Somatose is much cheaper than other nitrogenous food products. Among others Dr. Weber of Strassburg (Berlin Klin. Wochenschr., No. 0, 1895) has recently contributed the results of his experience with Somatose. It appeared to him of especial value in cases of gastric catarrh, ulcer, and cancer. He reports a case of gastric ulcer, in which in consequence of the pain produced by solid food, the patient had to be fed with soups and had become greatly reduced in flesh and strength. Somatose was then administered in teaspoonful doses several times daily, and notwithstanding the occurrence of a hemorrhage he increased visibly in strength, regained his appetite, and soon was able to resume other light foods. This rapid improvement is ascribed by the author in great part to Somatose. Infants suffering from gastro-intestinal affections also derive much benefit from this preparation. Admirable results were also obtained in several cases of severe migraine attended with vomiting. Weber is convinced of the utility of Somatose in anaemia—both in the anaemic conditions of childhood which are associated with scrofula and rickets, and in the anaemia following loss of blood or occurring during convalescence from febrile diseases.

Therapeutics of Cholera Infantum.

Gustavus Blech, M.D., St. Louis, in an article in the New York Medical Journal says that no strict rules can be given for the treatment of disease. It is for this reason that so many physicans say we do not treat a disease, but we treat an individual. True enough, we treat the individual, but what we have most of all to consider is the disease. The individual will dictate us alterations tnd modifications in our treatment.

A general plan of treatment may be outlined, however, and I will try to do so in regard to one of the most fatal diseases of babyhood—cholera infantum. There is a certain philosophy in therapeutics which I would frame in the three following rules: First, remove if possible the disturbing causes; second, treat symptoms which per se are liable to endanger the life of the patient; and third, sustain vitality.

The ætiology of cholera infantum is not obscure. Whether or not of microbic origin, one thing is sure—it is due to a chemical decomposition of food, causing an inflammatory condition of the digestive and alimentary canal. Heat per se is not the immediate cause of this disease, but it influences its course considerably. Therefore, gastric or intestinal disturbances in summer demand a closer attention than those which occur during the colder season. Cholera infantum is a disease met even in the palaces of the rich, although not so often as in the tenement houses of the poor, which fact proves again that bad air, filth and lack of ventilation are also of a predisposing influence, as well as an obstacle to a quick cure.

As soon as called to a case of cholera infantum, prohibit for the first day any food whatever. So far as I know the best antiseptic (which has also a strong tendency to reduce local inflammation) was peroxide of hydrogen (medicinal) until hydrozone was used by me. It can be administered internally as well as externally. I add a tablespoonful to a pint of water for washing out the stomach. The vomiting ceases after the first washing as a rule. If necesasry, this procedure can be repeated. If the vital power of the little patient is not too low it can produce no harm. But in every case, no matter how far advanced, I do not omit an irrigation of the bowels, for which purpose I use a soft rubber catheter attached to a common bulb syringe. The catheter is introduced as high in the colon as possible. It is unnecessary to say that the water must first be sterilized. I use cold water, and add to each quart about two ounces of hydrozone. The improvement after the first or second irrigation is marked. If necessary, these irrigations can be repeated every two hours.

No antipyretics should be given. If the fever is very high and if the irrigation of the bowels does not reduce it, the whole body should be washed with alcohol. The diet for the next twenty-four hours should be very light indeed. Sweet, strong Russian tea is all I allow.

The Therapeutical Effects of Beta-Naphthol Bismuth.

BY HUGO ENGEL, M.D

Should each decade of the nineteenth century be given a name to represent the progress made and the activity displayed during it in the various branches of medicine, we might bestow upon the period of the last ten years the appellation of the epoch of the discovery of new remedies. It, indeed, is not easy to keep step with the rapid march of advancement in therapeutics. And it is not only the great number of new drugs—though so great as to cause our admiration of the wonderful fertility of the human brain in the invention alone of names for them—but it is also the definite results following their employment, that has made this decade so remarkable. That some chaff is mixed up with the wheat scarcely deserves mention; whenever truth and real worth achieve victories, humbug is bound to claim its portion; but when it appropriates to itself the lion's share, it can do so only by proving the correctness of the adage: "Mundus vult decipi, ergo decipiatur." Fortunately, since a higher standard of medical education has extended the grasp of the intellect, that proverb to-day finds but little application to physicians, and the harvest of proprietary remedies, whose sole virtue (?) rests in the skill with which the owners have succeeded in giving a new name to well-known drugs, has been but limited.

Among the many achievements of the modern manufacturing chemist one class has not attracted in our country the attention it deserves—viz., the combination of phenol, cresol, and naphthol with bismuth. Of these I have thoroughly tested but one—beta-naphthol bismuth—and so reliable have I found this drug, and so superior in intestinal complaints to all the various bismuth salts previously known, that I determined to publish my observations for the benefit of the medical profession as well as for that of suffering humanity.

From the reports of experiments made in Professor Nencki's Laboratory at the St. Petersburgh Imperial Institute for Experimental Medicine, we learn that beta-naphthol bismuth, when introduced into the stomach, is decomposed into naphthol and bismuth to some extent; some passes on into the intestines, where the conditions are also favorable to its complete decomposition from the acid reaction of its contents and the presence of the pancreatic juice. Naphthol is but partially eliminated with the urine; the residue passes through the whole alimentary canal, and is finally excreted by the fæces. Bismuth, on the other hand, is totally excreted with the fæces as sulphide (in man; in the dog not, because of the relatively much greater amount of muriatic acid in that quadruped, causing the formation of some soluble chloride, but most of it undergoing the same changes as in man). In no single case were any toxic symptoms observed, though administered in daily doses of seventy-five grains (one hundred and fifty grains to dogs).

Another observation showed that all the combinations of the phenols with bismuth undoubtedly arrested the development of bacteria—an important fact which, though explained by the separation occurring in the intestinal tract, yet by itself explains the remarkable effect of these remedies in certain bowel complaints.

Professor Hueppe also found beta-naphthol bismuth a most powerful intestinal antiseptic and recommends it as a specific in Asiatic cholera. He treated a number of cases with it in one of the Hamburg hospitals. Von Nencki noticed that the drug was well borne by patients even when continued a long while. Other Russian physicians administered it in Baku in daily doses of fifteen to thirty grains in choleraic diarrhœa and allied diseases, and, while recovery occurred in almost all cases, injurious effects were not noticed in any.

Wilcox read last December a paper on bismuth in general, in which he speaks highly of the combinations in question, and finds the beta-naphthol bismuth especially indicated in all fermentative bowel complaints.

By Jasenski it has been used with success in chronic intestinal catarrh and in cancer of the stomach. The eructations and the vomiting were completely relieved in the latter disease.

I will now report a few cases from my own practice to illustrate the effect of the preparation.

A. G., aged twenty years, had been a robust, healthy young man up to July, 1894, when, while at the seashore, he was seized with severe abdominal pain in the left hypochondriac region. The pain returned from one and a half to two hours after every meal, and was at first felt only for a few minutes. Gradually, however, this time extended; the pain lasted an hour and more, until it finally never ceased completely. Simultaneously with this exacerbation in the pain the general health deteriorated; the appetite vanished, severe thirst took its place, and A. G. lost decidedly in weight. This train of symptoms went on unchecked until, early in October, vomiting and diarrhœa made their appearance, from which the patient had suffered but a few days when high fever set in, forcing him to seek his bed. Here he remained confined for over two weeks, during which his temperature, without any regularity, varied from 102° to 104.5° F. The discharges were of a fœtid odor: the vomited matter, either half-digested food or acid mucus. By the end of the fortnight the fever left him, and he was once more able to be about; but the vomiting, diarrhœa, anorexia and pain, and the loss in weight continued unabated. It was in this state that I first saw him on November 1, 1894.

I had known the patient previously, and was not a little surprised at the fearful change in his looks. He made the impression of a consumptive in the last stages, and even the red hectic spots, almost pathognomonic of that malady, were visible on his cheeks. He could scarcely keep himself in the upright position, so weak was he. The physicians had pronounced his case first one of walking typhoid and later on acute malaria. There had been no bleeeding from the nose, no general malaise preceding the first attack of colicky pain—which had set in abruptly in the midst of apparent health two hours after a meal —and the temperaure record also disproved the presence of either fever. Upon physical examination, I could detect no organic disease except an enlargement of the spleen. There were no rose-colored spots; the abdomen was flat and sunken; there were no tympanites, no gurgling sound, and no tenderness whatever in the right iliac fossa. Neither had dysentery instigated the complaint; the patient never had any bloody discharge from the bowels, no feeling of a heavy weight in the rectum, and intestinal tuberculosis could also be excluded. Nowhere was there felt any pain on pressure, but the pain seemed to radiate from the middle of the descending colon, and to extend thence a little over to the other side, not much beyond the umbilicus. It seemed an ache with colicky exacerbations. The tongue was covered with a thick yellowish fur and evinced a tendency to dryness; no sordes. Sleep very restless. Pains and aches all over the body, reminding one almost of those accompanying trichinosis. The patient was an Israelite. Nothing else could be elicited except the general debility, which seemed to have seized upon every tissue. Urine slightly albuminous; no casts; no sugar; otherwise normal; quantity also normal and no disturbance in micturition. Temperature, 100.4° F.;pulse, 126.

The discharges were dark brown, highly offensive,fluid, frothy, and from six to fifteen in number daily. I took a small quantity with me in a bottle and injected some of it into the abdominal cavity of a rabbit. The animal seemed restless for about ten minutes, and appeared as if under the influence of some narcotic, and in about an hour after the injection it had four fluid stools in rapid succession, when it was suddenly seized with spasms and died. Except a congested appearance all over the small intestines, no lesion was visible at the autopsy. The bacteriological investigation showed the presence of five different kinds of micro-organisms, one of them resembling the bacillus of cholera morbus, but the tests have not yet been completed.

The patient had been in charge of able physicians; his diet had been carefully regulated and a great number of drugs seemed to have been tried in vain. I continued the milk diet that he had been on for several weeks, but insisted upon the milk being boiled and drunk hot, and prescribed for him cachets each containing five grains of beta-naphthol bismuth—three such cachets to be taken three times daily.

November 2d.—Pain had lessened after the first dose of this bismuth the day before, and almost ceased after the third dose this morning, when it was scarcely perceptible. Vomiting occurred, but once yesterday. Tongue begins to clear off; slept better; pains in joints stopped. The stools have greatly improved in odor and lost their dark color and frothy appearance. Had only four discharges since first dose of medicine. Temperature, 99° F.

3d.—No pain; temperature normal; no vomiting, but two stools of yellowish color. Says that he feels much better and would like to eat something solid. Tongue but slightly coated; sleep undisturbed. Ordered toasted white bread with butter, salt soda crackers, and poached eggs.

4th.—Appearance greatly changed for the better. None of the morbid symptoms returned. Tongue clean. Had one healthy-looking stool, though still soft. Ravenous appetite. Had very good sleep for twelve hours, during which he did not wake once. Permitted more variety in his food.

5th.—Greatly improved in every way. Gained three pounds. Had no stool. Ordered to take but one cachet twice daily and to have a clysma if the bowels did not move.

From this day on his recovery was rapid and uninterrupted, and two weeks later he had almost regained his former weight and robust appearance. I induced his parents to go with him to the mountainous country in Virginia. When he returned, a month later, he was the picture of health.

J. H., aged thirty-four years. After eating some oysters, November 11, 1894, was seized with cramps in his stomach and diarrhœa. Ordered bismuth beta-naphthol, fifteen grains, three times daily until better, then to take less. Stopped remedy after but two doses, because of the complete cessation of symptoms after second powder. Neither pain nor diarrhœa returned. Recovered.

W. D., aged fifty-four years. On November 12, 1894, called on me complaining of looseness of his bowels, which had commenced a few days before after eating some ice cream and cake. It always sets in immediately after eating. Some eructation. Tongue slightly coated. No other sign of any disease. Prescribed ten grains of beta-naphthol bismuth. Diarrhœa stopped after fifth powder, but, as he had a slight relapse a few days later, I caused him to take for a week five grains of the drug three times a day, then twice, and ultimately once a day. During the first week his bowels had to be opened several times by an injection. This constipation ceased with the withdrawal of the remedy.

C. M., aged sixty-one years. Suffers from frequently recurring attacks of camp diarrhœa contracted during our late war and evidently due to old ulcerations and thickening of lower colon. Beta-naphthol bismuth controlled the diarrhœa perhaps quicker than any other drug (except opium and its preparations), but proved of no avail in the cure of the complaint.

J. R., aged two months. When, on November 20, 1894, I first saw this infant a priest present remarked that we should not torture the little thing, as it plainly was dying. I must admit I myself had scarcely any hope. When the little girl was nine days old the mother's breasts had suddenly ceased the secretion of milk, and the child had been fed in the most injudicious manner possible. The skin was wrinkled and dry; nothing but a withered integument seemed to cover its tiny bones. No ulceration, no specific disease. The baby vomited anything it swallowed and had from ten to fifteen fluid discharges daily. No treatment seemed to improve it. I insited upon a trained nurse. Every vessel or utensil used for feeding was thoroughly disinfected and kept aseptic; the utmost cleanliness was enjoined; as diet, nothing but rice water to be given with some whisky added, and the following powders to be taken internally:

℞	Pepsin. Boudault	gr. iv ;
	Bismuth B-naphthol	gr. iij;
	Pulv. aromat	gr. $\frac{1}{3}$
	Pulv. Doveri	gr. j ;
	Saccharin	q. s.

M. ft. pulvis. Sig.: One such powder to be taken three times daily.

The improvement was astonishing. Vomiting ceased the first day; the second the stools, previously of a greenish color, yeasty and of a sour odor—as in cases of so-called acute dyspeptic diarrhœa, undoubtedly a misnomer—had assumed a healthier appearance and their number had been reduced to four the third day the disease had actually disappeared. The baby recovered completely and is as healthy looking to-day as if it had never suffered from so formidable an attack as the one described.

M. F., aged five months. On December 3, 1894, I found this baby, also "artificially brought up," from similar causes afflicted with the same disease and in nearly the same state as the foregoing. Having made similar arrangements concerning a nurse, disinfection, cleanliness, and a suitable diet to those in the first case, I prescribed the same powders as in J. R.'s case, except that I substituted the subnitrate of bismuth for the beta-naphthol preparation. Under its influence the vomiting became somewhat less severe, and there were also from two to three stools a day less, but otherwise no improvement discernible for three days, when I had recourse to beta-naphthol bismuth. Within twelve hours after the second dose a more decided change occurred: on December 7th the improvement was still more marked, and I increased the dose of the beta-naphthol bismuth by two grains.

December 9th.—Constipation had set in. This infant also made a perfect recovery.

I have administered the drug in a considerable number of cases, but those quoted will suffice to show the effect of the remedy. The more we have reason to suppose that the intestinal contents are in a state of fermentation brought about by the presence of pathogenic bacteria, the more the toxic products of the latter are responsible for the general impairment of the health of the patient, the more there is evidence of auto-intoxication—the more apparent and the more rapid will be the effect of the beta-naphthol bismuth. It far surpasses that of the older preparations of bismuth. In my opinion, and if I can draw such a conclusion from the cases under my charge, the beta-naphthol bismuth—while the most reliable intestinal disinfectant that we possess to-day, and combining with its antiseptic action an astringent effect—can be given with impunity in doses large enough and for a sufficient length of time to achieve our purpose—the cure of diseases due to the presence of infectious material in the alimentary canal—in infants as well as in adults.—N. Y. Medical Journal.

:o:

Recent Studies of Acute Anterior Poliomyelitis.

C. v. Kahlden says (Centralblr. f. Allg. Pathol. u. Path. Anat.) that the histological findings in all of the cases show uniformly a destruction or degeneration in the ganglion cells. The degeneration varied between a slight swelling of the protoplasm and a glass-like body without any processes. The medullated nerve-fibres were either intact or showed a slight diminution in size. In other cases the ganglion cells and nerve-fibres had entirely disappeared. In their place was tissue resembling in all respects glia-tissue.—St. L. Medical Jour.

Scarlatina and Measles Coexisting in the Same Person.

(Brit. Med. Jour.) On June 29th a boy of nine had sickened and complained of sore throat; next day a scarlatinal rash was undoubted. By July 6th desquamation was distinct on neck, breast, abdomen, and thighs. On the 9th he had severe coryza and a constant irritating cough. On the 10th he was covered over with a most intense eruption of measles. Desquamation, as if accelerated by the second skin attack, proceeded with unusual rapidity. It was impossible to trace the source of infection, but it is noteworthy that the two poisons must have found a lodgment in the child at much the same time. The boy made an excellent recovery.—Arch. Ped.

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GAILLARD'S MEDICAL JOURNAL.

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Nature and the Doctor.

We were struck by a remark made by a gentleman at the Richmond Academy of Medicine, as reported in the present issue of the Journal,—"The use of the forceps, douches, packing, and curetting interfere with the process of Nature which is fully capable of taking care of itself." This is quite in accordance with the remarks which the doctor frequently hears about letting "Nature take its course." We quite agree that Nature is able to take care of itself, though that extremely indefinite individual is commonly designated as herself. Set a house on fire and Nature will certainly take good care of herself. Unless thwarted, she will burn everything within reach in accordance with one of the fundamental laws of her being. The chief interest of the doctor is the welfare of his patients, and this same Nature, who is lauded so highly, exhibits at times a most reckless propensity to kill some of them. She plants a little malignant nodule and if allowed to have her way will take the life of her victim. She deposits a few diphtheria bacilli in the larynx of a child and if unthwarted will pursue a pitiless and relentless course until she has slowly strangled the innocent sufferer. A few streptococci are planted on a freshly lacerated cervix. Nature in such a case shows an almost uncontrollable propensity to cause septic endometritis, salpengitis, or peritonitis, and to kill that mother, as orphans by the ten-thousand have borne witness. Nature is sometimes kind and benignant; sometimes relentless and cruel.

The next speaker in the discussion stated the truth very concisely in saying that "masterly inactivity embodies principles as potent for harm as for good. There is a time to hold hands off—when Nature is equal to the task of delivery and subsequent restoration to health." There can be no doubt that there is much unnecessary meddling indulged in by doctors, but it is equally certain that it is easily possible to go to the other extreme.

The doctor often hears the impertinent inquiry by the laity whether the best plan of treatment is not that in which Nature is allowed to effect a cure, the implication being that medical practice on the whole consists in thwarting Nature. When Nature tends to cure, by all means give her every opportunity. When her whole tendency is to kill, if the doctor has any means at his command by which he can thwart her intentions, let him use them and use them vigorously. Physicians should not tolerate the commonly accepted idea that Nature is only a benign being, with nothing but the good of the human race at heart. It has been said with much truth that while Nature is careful of the species she is careless of the individual. She produces a thousand seeds from a single plant, but is so careless of the individual seed that only a dozen survive to maintain the species. The doctor should certainly not produce by his practice or tolerate the idea that the essential work of the physician is to run counter to the designs of Nature. When she is competent to cure he stands by and assists; when incompetent to do this or seems determined to take the life of the patient he opposes her by every means in his power.

Boldness With Caution.

We would not be misunderstood as advocating active medication by the physician in every case he meets. Many diseases are strictly self-limiting, or tend strongly in that direction. This is especially true of the infectious diseases. One of the chief sources of error in estimating the effect of treatment and the value of drugs lies in the fact that the natural history of disease is ignored. The doctor gives a certain medicine, the patient recovers, and the treatment receives the credit, when as a matter of fact the disease pursued its natural course, but little modified by the treatment. These diseases pass through their natural stages. The doctor cannot shorten them nor cure them, but he may notwithstanding often rescue his patient from death. There are pitfalls at every stage, into which the patient may frequently be prevented from falling. The way may be smoothed and made less difficult, and with the aid of his physician the patient may often surmount obstacles which would otherwise be impossible. While the doctor cannot cure, he may save life by conserving the strength and vitality of his patient, and enabling him to pass safely through the natural course of his disease. Complications frequently demand most vigorous treatment.

It is an error to jump to the conclusion that all diseases are of this character. Many diseases tend strongly to the destruction of the patient. Proper medical education should aid the doctor to discriminate between these two classes and those which lie in the borderland between them. The successful doctor is the one who knows when his patient requires vigorous treatment, or mild and supporting treatment, or no treatment. The successful surgeon is neither the one who cuts indiscriminately, nor he who fears to cut at all, but he who judiciously selects his cases for operation. The words of Valentine Mott apply as well to the physician as to the surgeon. "Be bold but cautious:"—cautious in the selection of cases for operation or for vigorous treatment, cautious in every detail, cautious in every prescription; bold to act in emergency or when action is indicated, quick to see one's duty and prompt to do it, not acting for the sake of acting, but fearless to act when the well-being of the patient demands it. Boldness with caution is an admirable quality for the medical practitioner whether he be surgeon or physician.

Regulation of Medical Practice.

We take pleasure in publishing in the present number an article by Dr. Millard on the Legislative Regulation of Medical Practice. It is a most complete exposition not only of the reasons for desiring higher medical education, but also of the various steps to be taken for accomplishing that end. The paper had the approval of the American Academy of Medicine, before which it was read, and a resolution was passed that its conclusions are expressive of the opinions of the Academy. The subject is one in which every medical man is interested. He cannot but approve the attempts now being made to advance the standard of medical attainment, unless he is devoid of all professional honor and pride.

One of the necessary results of the advances that have been made in many States is a similar advance in others. As State after State raises the standard of its practitioners and excludes charlatans and quacks, neighboring States must follow their example in self-defense. Unless they do this they will be overrun by a horde of professional highwaymen. The time is not far distant when no State can afford to leave itself at the mercy of these robbers.

Recent legislation has been directed to the attainment of three objects: entrance examinations at the medical schools, thus aiding and stimulating them to raise the standard of medical education; suppression of charlatanism and quackery by those who shield themselves behind diplomas; State boards of medical examiners by which incompetent men and those improperly prepared are excluded from joining the ranks of the profession. These laws have in most cases been passed little by little, opposition to them having been intense. In but few instances have medical laws in any degree satisfactory been secured without prolonged labor and tireless fighting. And yet, every step toward restrictive medical laws tends directly to the common good. They are also greatly to the advantage of the profession at large and of the individual practitioner, although there are a few so blind as not to see it. Medical men can do much to influence popular opinion and thus render it easier to obtain good medical legislation. It is to be hoped that no medical man will be found so oblivious of his own welfare and of the general good as to stand in the way of this good work.

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The current issue of the American Lancet carries with it the news of the retirement of Dr. Connor from editorial work and a discontinuance of the journal with which he has been so long identified.

Dr. Connor was the nestor of the corps of medical editors of the United States, beginning his editorial service in May, 1871, as editor and publisher of the Detroit Review of Medicine and Pharmacy, which afterward became the Detroit Medical Journal, the Detroit Lancet, and finally the American Lancet.

Words of encomium sufficiently high can scarcely be written of Dr Connor's editorial labors. In season and out of season his pen has never faltered in manly efforts to elevate the members of the medical profession, to build up representative societies, and to advance the cause of medical education. It is no disparagement to others to say that better editorial writing than that of Dr. Leartus Connor has not been done on the medical press during the past twenty-four years. Dr. Connor's editorial pages have always been high-toned; he never pandered to any scheme that was not honorable and creditable to his own good judgment. His pen was strong and never uncertain in what he believed to be a righteous cause. We very much mistake if his pen remains idle. At any rate, we will miss the American Lancet and his editorials.—Lancet-Clinic

According to the Index Catalogue of Dr. John S. Billings, the library of the office of the Surgeon General of the United States Army contains a grand total of 183,778 books, etc.

PROCEEDINGS OF SOCIETIES.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

WM. S. GORDON, M.D., President.

Meeting of May 14, 1895.

The President read a report of a case of puerperal sepsis, illustrating the advantages of local treatment.

DISCUSSION.

Dr. H. H. Levy said that in many instances he had followed the line of treatment laid down by the President; but in many other instances, this plan could not be followed. Each case required a certain course according to indications.

Dr. Hugh M. Taylor said it had been his misfortune (he looks upon every such case as a misfortune), to see in consultation three cases of puerperal sepsis. There was no disease he more feared, none he endeavored more to prevent, and none that he thought called for more decided radical treatment. In most of the cases that had come under his observation, he could assign the focus of infection to cervical laceration. He thought if some of those who advocated the do-nothing policy would look at some of these infected lacerations, mark how nearly they approach in appearance a foul, swollen, sloughing, infected sore seen elsewhere, they would appreciate the importance of rendering aseptic such a wound. If they should, remember that a continuous mucous membrane and rich lymphatic circulation present a most favorable condition for extension of the local septic condition and general septic infection. When sepsis originated in, or extended to the uterine cavity, its mucosa became pus-secreting, a condition of septic phlabitis and lymphangitis ensued, foci of septic infection occurred in the uterine walls, and extension to the tubes and their peritoneal investment was not infrequent. The sooner we look upon such a cavity as a pus-secreting and pus-retaining cavity, the quicker will be our appreciation of the importance of directing all our efforts towards removing necrotic tissue by curettement, and debris, by irrigation and drainage. Not until the focus of sepsis is destroyed by sterilization, can we hope to tide the patient along until the absorbed poison is eliminated.

Dr. J. S. Wellford thought that the tendency was toward meddlesome midwifery. The use of the forceps, douches, packing, curette, interferes with the processes of nature, which is fully capable of taking care of itself, and the introduction of sepsis is the result. He did not believe there was danger of sepsis from a tear, unless it be a large one. In tamponoring the uterus, we dam up every means of outlet thereby bringing about trouble. We try to do too much. Some conservatism is necessary.

Dr. Taylor. The tendency on the part of surgery to invade the domain of midwifery has been often decried. Meddlesome midwifery and masterly inactivity embody principles as potent for harm as for good. There is a time to hold hands off, i.e., in the first stage of labor and in all stages where Nature is equal to the task of delivery and subsequent restoration to health.

Twenty years ago, the clarion voice of the teacher of obstetrics rang out in opposition to "meddlesome midwifery," and in favor of masterly inactivity. No words in the English language, perhaps, have done as much harm. Under the guidance of such teaching, prolonged, exhausting labors; impacted pelvis; contused, sloughing soft parts; sepsis and dead children frequently resulted.

Masterly activity, when Nature is unequal to the task, is the order of the day, and has almost banished that miserable trouble, vesico-vaginal fistula, and many other post-parturient ills.

Mark W. Peyser, M.D., Sec.

An Italian chemist, M. Pellegrini, claims to have succeeded in producing true sugar synthetically at a low cost.

Patti and Strong Drink :—The Temperance Advocate says that the Medical Pioneer, in a recent issue, quotes Madame Patti in some remarks upon "How to Become a Great Singer," as saying : "Alcoholic stimulants of any kind tend to irritate the throat, and should be entirely abstained from. Even light wines are no exception to this rule." She adds : "Most people are familiar with the hoarse voice of the hard drinker, and it is often said of such an individual that he has burnt his throat with drink. Even a moderate use of alcohol may, therefore, tend to make the voice husky." This testimony from such a source has great value, and exceptional significance for all who have musical aspirations and who would preserve the voice in its best condition.

MEDICAL NEWS AND NOTES.

More Newspaper Medicine.—The politician who would not allow such a little thing as the constitution to "stand between friends" was a stickler in comparison with the author of a dispatch from Paterson, N. J., published in the Sun on Friday of last week, concerning a woman who. having been badly frightened by a stroke of lightning, called her daughter's attention to her trembling hands. "As she held them up to look at them herself," the dispatch goes on to say, "one of her eyes fell out into her lap. The other eye fell back into its socket and appeared to be lost in her head." It is added that the doctor in the case "says she had been afflicted with tumor of the nose, and that the fright snapped the muscles of the eyes and the balls became dislodged. The eyeball that fell back into her head is coming back in its place, and today it can be partly seen through the small opening of the eyelids." The final fate of the eye that dropped into her lap is not stated.—N. Y. Med. Jour.

The Doctors Most of All.—Referring to the public movement in this country in favor of good roads, the Journal of Commerce says that it is a mistake to suppose that only farmers are concerned in the movement for good roads. "City merchants and manufacturers," says the Journal. "who depend largely on the country for their patronage, are also interested, and ought to join the movement." We might add, with much force the assertion, that the country doctor, and as well those doctors engaged in suburban practice, are as much interested as the farmers ; indeed, four-fifths of the time given to practice is taken up in driving from house to house. It is therefore clear that no single class of our citizens, is more interested than the doctor, and when we consider that much of his travel is done at night, it is apparent that the doctor needs good roads more than any other. The whole profession therefore should use its powerful influence in support of all reasonable legislative enactments in favor of good roads. It is a mistake to allow such a wise and advantageous measure to drift into the custody of mere partisans or cranks, and physicians everywhere, having influence with legislators, should throw that influence in favor of this movement, for the doctor most of any, is interested.—The Journal.

During the closing hours of the last Congress of blessed memory, a discussion arose on a bill to admit antitoxine free of duty. The chief opponent of the bill was Mr. Ray, a Republican, representing the twenty-sixth district of New York. He frankly avowed that the subject was one about which he knew nothing. We quote from the Congressional Record: "I do not know what antitoxine is, where it is made, what it is used for, nor whether it is animal, vegetable, or mineral, and I have inquired of a great many members of this House, but fail to find one here who has the slightest idea what this new discovery is, or what it is composed of. If it is a good thing, the owner of the patent or secret ought to come into the United States and establish an antitoxine factory here and give us an American industry; and for the purpose of building up such an industry if its production be an industry in the United States, I oppose the bill."

Such ignorance on the part of men who are not supposed to be, but who ought to be and are not abreast of all the great questions of the day, including public hygiene, is not as astounding as it is lamentable. But Mr. Ray was not alone in not knowing what antitoxine is. His colleague, Mr. Van Voorhis, wanted to know whether the horse was not the raw material of antitoxine, and whether under the bill horses would not come in free. Mr. Henderson, of Iowa, who owned to the possession of "a stack of literature on the subject," added to his fame as a humorist by this lucid description of the antitoxine process: "They vaccinate the horse with diphtheria. Then they put him on to (sic) a very high grade of feeding, according to a formula which has been established, and they feed him up until his mane and tail are in the proper relation to each other, and then they bleed him; and this blood is the antitoxine." This gentleman, says the Boston Herald, was fully impressed with the idea that the preparation of antitoxine involved setting to work the machinery of torture on the horse, and in his most serious vein he declared that Congress should not commit itself to this animal-torturing business until they knew something about it.

Here is a fitting mission for the Medical Record and New York Medical Journal to look after the Congressmen from that State. A "whole stack of literature" consisting of excerpts from those journals' publications on antitoxine, should be at once forwarded Messrs. Ray and Van Voorhis, who have brought this disgrace upon their State.

We would suggest that the Chicago Sanitary News should do the same by Mr. Henderson. Here is a new educational field open for all these journals, unless perchance they feel that it would be casting the pearls of knowledge into the mire of demagogical unworthiness.—Boston Med. Jour.

MISCELLANEOUS.

The Pathology of Graves' Disease.

Reinhold (Munch. med. Woch.), relates the following case in a woman, aged 35. The patient had previously been under treatment for hæmatemesis, and at that time no signs of Graves' disease were present. She was admitted with influenza, Pfeiffer's bacillus being found in the sputum. On the third day the temperature again rose, and there was painful swelling of the thyroid gland. She was discharged well a month afterward. Three months later she was readmitted with all the symptoms of Graves' disease. Here the connection between the strumitis and the latter disease must suggest itself. The same parts of the gland were enlarged as after the influenza. The inflammatory affection had given rise to a permanent alteration in the gland. The occurrence of Graves' disease after influenza has frequently been observed. Thus after an acute infective involvement of the thyroid gland, Graves' disease may appear. The author refers to the different views as regards the nature of this affection—whether it is due to a disease of the sympathetic or to a lesion in the medulla (Mendel), or whether it is a functional neurosis (Charcot). Moebius has advanced the view that it is a disease of the thyroid gland itself. He points out that occasionally some or all of the symptoms of Graves' disease may exist in ordinary goitre, and that Graves' disease is in many ways the opposite of myxœdema, etc. It has been suggested that the former is due to hypertrophy, the latter to atrophy of the gland; myxœdema has been known to follow upon Graves' disease. If the local theory is accepted, many clinical difficulties still remain. The specific treatment with thyroid gland has been without effect and opinions on the value of removal of the thyroid are divided. The author refers to another case in which Graves' disease followed upon scarlet fever. Here the gland was already enlarged, but no symptoms existed previously.—Br. Med. Jour.

Don'ts of Rectal Surgery.

1. Don't tell your patient who has fistula that he can put off an operation ad libitum; it may at any time assume an active state and do much harm by burrowing.

2. Don't make light of your patient when he or she complains of pain after an operation for fistula, but examine painstakingly; you may

find an abscess forming, or already formed, and thereby save both the patient and yourself much trouble.

3. Don't be swift to say that you can cure or heal all fistulæ for the reason that you may (and will) meet with tubercular fistulæ, which may and do fail to heal.

4. Don't operate on a patient with a well-marked tubercular fistula, who has lost a great deal of flesh and who is now losing flesh. Defer the operation until your patient improves in strength and flesh. Give your patient vigorous constructive treatment and operate when he begins flesh-making.

5. Don't say to your patient, because he has a number of fistulous openings, that he has simple fistula. An examination may prove the existence of a stricture, the fistulous tracks being the result and not the disease per se.

6. Don't fail to tell your patient, who has a very bad fistula, that if he gets well of his fistula, he may have a weak sphincter, or possibly incontinence.

7. Don't fail to seek out all sinuses when operating for fistula.

8. Don't fail to trim the edges of the sinus after an operation.

9. Don't tell your patient that the operation is absolutely free from all risk, and that it amounts to but little, for the reason that he may not follow out your directions, thereby making the operation which you said "amounted to but little," a failure.

10. Don't say to a patient, who belongs to a phthisical family or who even has incipient phthisis, that he or she should not have an operation ; but, on the other hand, urge an operation for the reason that the patient will get rid of a dangerous local point of infection and also get well of a troublesome and painful disease.

11. Don't delay the opening of a rectal abscess until the pus can easily be reached ; but if you suspect pus, reach it with the knife though it be ever so deeply situated.

12. Don't stuff an abscess cavity too full of cotton, but put loosely carbolized cotton at the bottom and depend on watching it to make it heal from the bottom.

13. Don't make a positive diagnosis of internal hemorrhoids as the result of digital examination alone.

14. Don't be too ready to diagnose internal hemorrhoids because your patient has hemorrhage from the bowel after actions or on going to stool ; not infrequently the hemorrhage comes from a bleeding surface, there being no piles at all.

15. Don't defer an operation for hemorrhoids because the attack is acute, for the reason that it will take as much time to subdue the acuteness as it would to get your patient well of the operation.

16. Don't leave any external tags after an operation for internal hemorrhoids. They often, from one cause or another, become irritated, giving great annoyance.

17. Don't do Vernieul's operation, viz.: divulsion for the radical cure of prolapsing hemorrhoids. You will be disappointed as well as your patient.

18. Don't neglect to see your patient at bed hour and make him comfortable for the night. Also see to it that there is no hemorrhage ; sometimes a ligature cuts through, opening up a blood vessel from which your patient might bleed to death.

19. Don't say to a patient who complains of his rectum without any local lesion, that he has nothing the matter with him. Examine his prostrate, urethra and bladder. He may have one of those persistent reflexes which we occasionally meet.

20. Don't tell your patient that he has cancer of the rectum unless circumstances absolutely demand it, for the reason that it is like putting a rope around his neck.

21. Don't temporize with cases that require an operation. Such a course will not benefit the patient nor the surgeon.

22. Don't fail to do all operations on the rectum antiseptically.—Dr. Leon Straus.

The Relationship Between Bovine and Human Tuberculosis.

Sherman and Lamkin (Medical Record) report the case of a boy, four years old, whose maternal grandfather had died of pulmonary tuberculosis, and whose nurse had about a year previously attended a daughter who also had died of pulmonary tuberculosis. The child had slight adenoid vegetations in the vault of the pharynx, and had suffered from two attacks of pneumonia, from both of which he had recovered entirely. When the boy came under observation he presented a spastic gait, frequently stumbling. Classic symptoms of meningitis, believed to be of tuberculous origin, progressively developed, and led to a fatal termination. Inoculation with tuberculin of three cows, from which was derived the mixed milk used by the patient, induced febrile reaction in two, and post-mortem examination in these demonstrated the existence of tuberculosis.—Med. News.

The Relation Between Rickets and Laryngeal Spasm.

Out of 1,600 rickety children observed by J. Comby in a Paris dispensary (La Pediatr.) only one-tenth had convulsions, while Henoch attributes two-thirds of the cases of glottic spasm to rickets. Although rickets is so common in Paris, glottic spasm is very rare, and the author believes there is a relation of cause and effect between rickets and laryngeal spasm. Still less is this so with dentition (even when delayed and perverted by rickets). Among 70,000 children seen during eleven years, Comby never saw convulsions of purely dental origin, and never had occasion to lance the gums. Craniotabes, sometimes assumed as a cause of gastric spasm, if looked for is found with "extraordinary frequency," and in cases where there has never been any convulsion or glottic spasm. The bond that unites the two morbid states (rickets and convulsions) is dyspepsia (dilatation of the stomach, diarrhœa, constipation, etc.) with autointoxication, from which arise all these nervous disorders, and in great part even rickets itself.—Ex.

Chest Pains.

Chest pains usually cause great discomfort to a patient, and are not sufficiently appreciated by the physician. Dr. J. K. Crook relates a series of causes in the American Medico-Surgical Bulletin, as illustrating the diagnostic value of chest pains. In some cases these pains are reflected from an overloaded or disordered stomach, in some cases it is neuralgia, and in exceptional cases the lungs themselves are at fault. Most persons with pains in the chest think they have some lung or heart disease. Pneumonia causes pain, but the other symptoms make the diagnosis clear. Consumption is not a disease accompanied by pain, and when it does occur it is from continual coughing.

Cauterization of the Nares and Accidents That May Follow.

Dr. E. F. Ingals, of Chicago, believed that, when properly done, this operation is quite as free from discomfort or danger as any other minor surgical procedure. Serious results were due to carelessness or inexperience upon the part of the operator, which induced him to make extensive wounds or to repeat burnings too frequently. He summarized his conclusions as follows: (1.) It is important that antiseptic applications be regularly employed after cauterization of the nasal mucous membrane, and that the nostril be closed by cotton for several days, whenever the patient is out of doors, to prevent taking cold. (2.) As a rule, at least two weeks should intervene between operations upon opposite sides, and three or four weeks between those on the same side. (3.) No serious results are at all likely to follow cauterizations made in this way. (4.) Practically, all cases of hypertrophic or intumescent rhinitis may be cured by this treatment, though occasionaly portions of the turbinated body must be removed—Jour. Amer. Med. Asso.

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ORIGINAL ARTICLES.

RUDIMENTARY PREPARATION, COMPARED WITH HIGHER EDUCATION, FOR SPECIALTIES IN MEDICINE AND SURGERY.*

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* President's Address, American Academy of Medicine, Baltimore, May 6, 1895.

It is taken for granted that an aspirant to the medical profession shall have taken a liberal course of literary study before commencing his professional education. If he has not received the degree of A.B., he should at least have had such mental training as to fit him for the comprehension of instruction in the different departments of medicine. From the standpoint of this academy, the intellectual development which is gained in high-grade schools or colleges is an essential qualification for entering upon the study of medicine. Hence it is not my purpose to discuss the literary attainments requisite for a medical student.

The attitude of the American Medical College Association and of the Southern Medical College Association has placed the matter of preparatory literary qualification for entering upon the study of medicine upon an entirely satisfactory basis, with the adoption of a uniform standard of literary qualification by all the colleges in the United States.

The only contingency attached to this fundamental condition for entering upon the study of medicine is the lack of good faith on the part of the medical colleges connected with the college associations in enforcing this requirement for matriculation. There is such an overweaning desire of the faculties of some of the medical colleges of this country to add to the number of students in attendance upon their lectures, that they do many things which they should not do, and leave undone many things which they should do, in regard to the preliminary course of study for medical education. We must, however, accept the provision already made, and not reopen the discussion on this point.

Before entering upon the consideration of special medical education, I avail myself of the occasion to congratulate the American Academy of Medicine upon the service rendered by this intelligent body in elevating the standard of literary requirement for entering upon the study of medicine. It has not always been shown that a classical education is essential for the proper comprehension of the technical terms of Latin and Greek origin, but also that the great benefits derived from a liberal education in improving the intellectual faculties, so as to enable the mind of the student to overcome the abstruse points involved in his researches, are of paramount importance. However difficult it may have proved to obtain a knowledge of the so-called ancient languages, and however little some of us may retain of this acquisition after the lapse of years, there is not a fellow of this academy who does not realize that the time and labor spent in securing the degree of A.B. was a good investment of intellectual capital, which is more prized than treasures of pearl and gold.

I shall ask your attention chiefly to the rudimentary and higher technical education for the medical profession. Apart from any consideration of literary qualification for the study of medicine, it is of paramount importance that a preliminary course of private instruction in the rudimentary branches should be received before a student goes to attend lectures in a medical college. This plan of going over the elementary branches in the office of a private preceptor was the recognized preparation for attending medical lectures fifty years ago in this country. It was not a mere formality to enter upon the study of medicine as an office student of a general practitioner at that period.

There were mutual obligations assumed by the student and the preceptor, and daily examinations were made upon the subjects gone over in the text books. It mattered not how wearied the preceptor might be from his labors of the day, he did not fail to meet the responsibilities of his position as teacher, and the student or students under his care underwent a searching examination each night upon what had been read during the day. The general rule at that time, in the South at least, was for the general practitioner to keep his own drugs and dispense them to his patients; so that his medical students had an opportunity of learning practically how to compound medicines and prepare prescriptions. It was the custom when there were several students in one office to serve alternately as assistants in putting up the medicines under the direction of the preceptor. The most experienced pupils were often placed in charge of those having less familiarity with compounding medicines, so as to secure proper filling of the prescriptions of the preceptor.

It is a notable departure from this regime of former times, that while students are under the general supervision of a preceptor at the present day, very few are subjected to the rigid examination upon the text-books before entering college, which is requisite for comprehending the lectures in the several departments taught in the medical schools. The instructions of professors are to all such only as the crackling of thorns under a pot when fire is applied; and they go away from the lecture room without taking with them any useful knowledge of the subject. Indeed, quite a considerable number of medical students receive no elementary tuition before entering a medical college, and are thus befogged by utter incapacity to grasp the rudimentary elements of medical education. Without learning something of Anatomy, Biology, and Chemistry, the A B C of preparatory work, the student is not fitted to appropriate any of the benefits of a medical lecture given under the supposition of this rudimentary knowledge.

It is not desirable that the student shall take up the higher branches until the lower branches are mastered, because a knowledge of the latter is requisite to a proper comprehension of the former. Overcrowding of the mind of the student with too large a number of topics at one time is also a radical objection to the old regime of a uniform curriculum including all the topics included in the course of lectures under the two years plan. The only effective mode of impressing the rudiments upon the mind of the student is to limit the instruction to a few topics at a time; and as the attention is usually directed to a single subject at the outset, under a private preceptor, the best foundation is thus laid for profiting afterwards by the courses of lectures upon elementary matters. When a year has been spent under the faithful tuition of a private preceptor, the pupil enters upon his duties in the college with an appreciation of what is taught, and is prepared to appropriate and digest the intellectual food, as the rations are dealt out by the professor in the class room from day to day. But it is desirable that digestible food be supplied by the purveyors.

This lack of rudimentary preparation, which was so grave an obstacle to progress in the plan of instruction adopted by the school which had only the two years' course of lectures, is not as patent in the curriculum of those institutions which have entered upon a graded course of three or four years. With a thorough preliminary literary training, a student may accomplish in the first year of a properly graded course nearly all that could be done by private pupilage under the care of a competent preceptor; and yet this general instruction cannot compensate entirely for the special personal teaching of the private office student. In view of the fact that a large proportion of the medical colleges do not insist upon an obligatory compliance with the formal regulation in regard to private office instruction, in the elementary department, before entering upon a course of lectures, it is incumbent that the first year shall be devoted to rudimentary branches. The essential feature of a graded course of three or four years is that the student's attention shall be confined to those subjects first which are preparatory for others. Under the former dispensation of only two courses of stereotyped lectures, which were repeated from year to year from the same manuscript by the professors in our medical colleges, the first course was, to a large extent, lost to the student who had no preparatory instruction. The remarkable feature of such a mode of procedure is that any proficiency in the art of healing the ills to which flesh is heir should ever have been attained; and yet it must be admitted that many entered the medical profession under that regime, who, by diligence in study after receiving the degree of M.D., reached distinction as physicians and surgeons. It is held as an axiom, that experience is a dear teacher, and in nothing has this been more strikingly illustrated than in the knowledge of treating diseases obtained by practicing upon the infirmities of mankind. We may well adopt, in this regard, the sentiment that "Man's inhumanity to man makes countless thousands mourn," and pity the poor victims of the doctor's experience.

The fundamental principles underlying medical education cannot be mastered without thorough comprehension of the rudiments, and though there is little to fascinate the medical student in the dry details of the elementary branches, they must be learned before any satisfactory progress can be made in the higher branches. If not well grounded in the rudiments, the superstructure cannot be relied upon to qualify the student for the intelligent exercise of the duties of the physician or surgeon.

It may be thought that drugs are only the tools which are to be used and that practical pharmacy should not occupy the special consideration of the medical student, but without a thorough acquaintance with materia medica the practitioner is at the mercy of every bungling apothecary who may be called upon to fill his prescriptions. The vast array of new preparations, which manufacturers are thrusting upon the medical profession, have supplanted to a large extent the old well-tried medicinal preparations, and unfortunately the glamour of novelty has captured many who are ignorant as to their composition. Experimentation upon an empirical basis is going on throughout this country upon the theories of interested hucksters, who are hawking their wares broadcast amongst the practitioners of medicine. Each manufacturer of drugs is striving to bring out something more attractive than his competitor, and it is most remarkable to note the varied combinations of known remedies, under new names, which are presented to the medical public from year to year, from month to month, from week to week, and even from day to day, by the traveling agents of these establishments. It is evident from the number of samples of these preparations which are left in the offices of practicing physicians, that many are experimenting upon their patients with these articles, and that, like the blind man with a club, they are floundering about without considering whether they may do good or harm to their patients. This is all wrong, and a proper knowledge of pharmacy would save the profession from falling an easy prey to these harpies, and from many a blunder free us, in the application of remedies for the relief of suffering humanity.

A rather ludicrous exemplification of the view taken from the standpoint of the druggist, as to the relative value put upon different articles of the materia medica, occurred in my practice very recently. The time-honored formula of Epsom salts, manna, and infusion of senna leaves, was thought to be indicated in the case under treatment, and my prescription went to a druggist, who supposed that he fulfilled his mission by keeping all the new remedies. After looking over the prescription, he handed it back to the bearer, stating that he had no senna leaves in his establishment, as this medicament had gone out of date long ago. Doubtless, he excluded from his shelves, also, such old remedies as ipecac, jalap, castor oil, spirits of turpentine, etc., to make room for the more elegant and fashionable preparations now in the ascendant with most practitioners.

The lesson to be impressed upon the medical student in regard to medication, is that the crude drug embodies all the qualities, which show its effects, more completely, in many instances, than the extracts and chemical alkaloids of the same article.

After anatomy, biology, and chemistry are well understood by the student, it is highly important that the materia medica shall be thoroughly comprehended in all its bearings and ramifications. Drugs in their crude state should be recognized by their physical properties and their dosage, independent of their therapeutic applications. The incompatibles, based upon chemical relations, must, of course, be known, as well as the contra-indications from their effects upon the organism; and no student can study understandingly the uses of medicines in practice without this knowledge. Much less should any practitioner prescribe those articles of which he does not know the ingredients, as is done so frequently at the present time by men of prominence in the profession of this country.

The plan adopted by the Imperial Academy of Brazil, following, if I mistake not, the French, is to require that the full text of all prescriptions shall accompany every vial or package which is sent out by an apothecary; and while it has some disadvantages in the facility of repetitions, I am fully impressed with its beneficial operations in the great majority of cases, both for the physician and patient.

If this clear record is made by a physician so that his patients may know what they are taking, nostrums and proprietary preparations of unknown components will not figure so conspicuously as at present. The laity would most likely soon become acquainted with the forms of disease in which the family physician used these secret preparations, and be able to dispense with his services in similar cases; so that self-interest would have its influence in preventing their appearance in prescriptions. When the formula accompanies a proprietary preparation the medical profession may employ it without violating any ethical standard, and in some manner which is inexplicable, these compounds secure the confidence of people more than a regular formula embodied in a physician's prescription. As a rule, the greater the number of ingredients which enter into a remedy the more it is appreciated, on the principle, no doubt, that if one agent does not suit the special disease another may afford relief. Note, for instance, the great reputation of Warburg's tincture, which embodies a vast list of drugs. While it is evident that certain combinations of the materia medica modify in a favorable manner the effect upon the system, the great tendency at the present day to multiply the articles in a prescription should be discouraged and the student should be taught to rely to a large extent upon the definite effects of distinct medicinal agents. Simplicity in prescriptions is highly commendable, and a proper understanding of pharmacy at the outset of the study of medicine, is most conducive to securing this desirable result. It is true that some seem to think that old things have passed away and that all things have become new in the matter of drugs, as in the practice of medicine and surgery. But it should be remembered that the effects of medicines on the human organs are the same to-day that they were in the days of Paracelsus or during any subsequent period of medical observations. We should not then ignore the experience of the past in grasping after the novelties of the present. Hold fast to all the good and eschew all that is bad, is a safe motto.

The therapeutic application of drugs depends upon a knowledge of the normal and abnormal conditions of the animal functions. While the term physiology is applicable to all organized substances and hence general in its operation, biology expresses more definitely the vital phenomena presented in the normal state of living matter, and must be comprehended by the student before he can understand the departures from the standard of health, known as disease. In other words, the transition from the physiological action to the pathological disorder of the system must become the basis for the use of remedies; and affords the only scientific explanation of therapeusis. A mere empirical treatment of disease has no rational foundation, but rests entirely upon the observation that certain classes of drugs, when given in definite forms of disease, produce salutary results; and hence are indicated in similar cases. This proceeds upon the supposition that like causes produce like results, without a recognition of many modifying elements.

There are very few, if any, specifics for diseases, and the student should be taught to interpret the indications for special means of relief, without any regard to a stereotyped rule of treatment in given forms of diseases. The therapeutic instruction should be founded upon those general principles which imply a knowledge of physiology, pathology, and materia medica, including pharmacy. The professor who limits therapeutics to the routine use of private formulas in certain diseases, falls far short of the high standard of teaching which the lights before us at the present day should lead us to expect. All are aware that therapeusis is not confined to the employment of drugs, and in many instances the result depends quite as much upon the diet and regimen as upon the medicine. But touching the medicinal treatment of any disorder, I protest strenuously against that mode of instruction which tends to empiricism rather than to secure a rational foundation for therapeutics.

There is a prevalent impression among the members of the medical profession that a very distinct line is to be drawn between the practice of medicine and surgery, by the relative demand for medication in the former as compared with the latter. Indeed, the adoption in European schools of the terms internal and external, for distinguishing the practice of medicine from that of surgery, implied a recognition of this division; and even in this country, the use of drugs has been relegated very generally to the physician.

For a proper view of the respective fields of service occupied by the physician and the surgeon, I have elsewhere defined the duties of the former, as limited to the correction of the functional derangements of the system; while the sphere of the latter is confined to organic or structural changes in any portion of the body. Any measure, whether operative or otherwise, which may conduce to the relief of these modifications of structure, must come, therefore, within the domain of surgery.

Local congestion and engorgement of tissues are not considered as structural changes; but whenever depositions occur which materially alter the size and density of the part involved, it becomes an organic modification: and falls under the category of surgical pathology.

This altered condition may be amenable to medication, and yet none the less surgical; so that the use of internal remedies is often requisite in treating a surgical case, in advance of an operation, or subsequently in the treatment of the patient.

The course of instruction in surgery should emphasize the fact that surgical disorders may occur in the parts of the organism which lie internally or externally, and that they may be treated by internal or external means; and that they are not limited to mechanical appliances.

The student should have it impressed on his mind, that all the complications growing out of an organic modification of tissues belong to the department of surgery, and must be taken into account in the treatment of the case.

The student should not learn simply how to cut, but also where to cut, and when to cut, as well as when to withhold the knife.

Surgical pathology ought to occupy a very conspicuous place in the preparation of the student for surgical work. In like manner surgical diagnosis presents an urgent claim to his consideration; and in these latter days when the cranium, the thorax, and the abdomen are becoming the workshops of the surgeon, it behooves the teacher to lay great stress upon the recognition of the disorders of their respective contents. A thorough knowledge of the part involved, including its relations to adjoining structures, in the normal state, is essential for detecting any departure from this standard in disease; and no student who is well grounded in anatomy and physiology ought to be at a loss in discerning the difference between the normal and abnormal structures. The microscope and other means, with certain instrumental procedures, are frequently requisite for a correct surgical diagnosis; and should enter into the rudimentary preparation for higher work.

If the dictum of a famous gynecologist should be generally accepted, in case of doubt as to the nature of any trouble within the abdomen of a woman, we would cut in and find out the origin of the trouble; and then make a radical operation or not, as might seem proper. I have witnessed such an exploratory procedure by the most distinguished operator in this country, and, nothing being found, the woman was left in blissful ignorance of the result, and claimed afterwards to have been greatly relieved of her pelvic trouble. While an exploratory operation may be sometimes warranted, and becomes emphatically a typical surgical diagnosis, we may lay it down as a rule, that masterly inactivity is preferable to laying open the skull, the chest, or the belly, for the purpose of discovering the nature of the internal disorder. I had a most untoward experience in former years from the use of the trephine for the removal of bone in a perforated fracture of long standing, which was thought to be the cause of epilepsy, when no projection was found, and my patient died from this simple operation.

An abundance of caution should be inculcated upon students in regard to surgical diagnosis of this character, and while circumstances warrant the resort to exploratory operations by skillful surgeons in some cases, it would be nothing less than criminal rashness in those having a limited experience in surgery. There are ways and means, however, independent of such procedures, to ascertain, with a reasonable degree of certainty, the pathological conditions involved in a given case; and in the course of instruction the most minute details should be dwelt upon, to elucidate such points as may effect an assured diagnosis before undertaking any surgical operation of magnitude. In view of the errors committed by distinguished surgeons from lack of proper precautions in making an examination of the case in hand, it is held that surgical diagnosis should occupy a more prominent place in our medical colleges than has been awarded to it heretofore. I know of what I speak, and if all the revelations of the errors in diagnosis made by surgeons were brought to light, they would suffice to impress this point.

The bearing or relative influence of the different departments of medical instruction upon each other is of such a nature, that all points should be impressed upon the mind of the student at the different stages of his course of lectures. To accomplish this satisfactorily undue prominence should not be given to any special branch; but all should receive due attention, by the grading of the subjects of study in a three or four years' course of lectures. With this rule laid down to guide the medical student, he should not entertain the thought of devoting himself to a specialty until after graduating in the regular curriculum of the medical college. He should have received, during his three or four years' application, a fair knowledge of all that is taught, and be prepared to enter upon the duties of a general practitioner in medicine and surgery; thus being prepared to determine the special line of service to which his attention may be given subsequently, and also having the proper qualification for entering upon the study of matters which shall fit him for it. It is not desirable that a student, at the outset of his medical course, shall determine to be a specialist; as this must warp his mind, in carrying on the different branches of the curriculum, towards those things which may promote his specialty, and lead to the neglect of other matters of paramount importance. After all the usual branches are fully mastered, and the student is in a position to exercise a choice of that field of life-work which is best suited to his tastes and capacity, he may be fitted for selecting a specialty in medicine or in surgery. Then and not before, provision may be made for taking up that line of study which may be requisite to qualify him for the special work which is before him. The specialist should not look upon his field of service as requiring less preparation than is demanded for the general practitioner of medicine and surgery; but as exacting a higher order of qualification by the addition of those attainments which are conducive to the proper discharge of the special service in his line.

This is an age of specialists, and we have in active operation fourteen distinct national organizations for the development of their respective views; while outside of these societies, other associations, for co-operation in different special fields, have been formed by those who are interested in circumscribing their labors. It is not necessary to enumerate the titles of these several bodies of specialists, as the fellows of the academy are presumed to be familiar with them; but it may be stated that they cover almost every phase of investigation which is comprehended by medical science in its widest and most extended acceptation. Even our great American Medical Association, which includes all classes and conditions of medical men, is, for all practical purposes, divided into sections of specialists, which operate independently of each other; and thus keep up the lines of separation between those members of the profession who are occupied in different departments of practice, having very limited professional relations with other practitioners.

The work of preparing medical men for specialists is met to a greater or less extent by the organization of polyclinics and post-graduate schools; and yet the limited attendance of the patrons of these institutions upon their brief courses of instruction impairs materially their utility. Unfortunately for all concerned, the rushing spirit crops out in everything at the present time, even from a boy pressing his suit with his sweetheart to the disciple of Esculapius who makes haste to secure his profession. If our people could adopt the German idea of thoroughness in executing what is undertaken, with the observance of the motto festina lente, it would redound to the building up of a solid foundation for the profession, by completeness and exactness in medical education. The graduate of a college who enters upon the study of some specialty in a polyclinic or post-graduate school should avail himself of all that can be learned in the special clinical course, and attend hospital service, illustrating the special work in view.

The post-graduate school should embody the highest order of instruction in all the different departments of medicine and surgery, as the teacher is supposed to be competent to direct the minds of those already well versed in medical knowledge to greater achievements in the special branch of their selection. The very best talent of the profession ought, therefore, to be employed in the work; and as a matter of fact, some of the professorships are filled by first-class men. But it must be admitted that many of the places are occupied by inferior men, who reflect no credit upon the undertaking, and have not conduced to the elevation of the medical profession. This, however, is no objection to the principle upon which they are based, and as few will attend the service of those who are inefficient, this must be a corrective in the working of these schools. Independent of the patronage by specialists, a well regulated polyclinic should attract those members of the profession who desire to keep abreast of the advances in the different departments of medical science, and their success is a matter for congratulation. The fad which has taken hold of a large number of medical graduates to visit schools abroad, where the language is unknown, and look upon the work that is done, without comprehending the pantomime enacted before them, seems to be at least a waste of time and a useless expenditure of money. If home institutions do not fill the ambition of these aspirants to fame, and they must seek a foreign field, it is far better for them to go to London or Edinburgh than to Paris, Vienna, or Berlin to complete their special studies. Any one who goes to the latter, without being acquainted with the language of the country, will require months, if not years, to become sufficiently familiar with it to profit by the lectures of the teachers, and few stay long enough to master the foreign tongue.

It can, therefore, avail little to make a stay of less than two years for the study of a specialty in a foreign school; and this sojourn is more for the eclat of kneeling at the feet of a teacher of great reputation than for any substantial advantages gained from his instructions, while greater prestige would attend a more diligent use of the opportunities afforded here in our polyclinics.

In the evolution of specialism it may be anticipated that little or nothing will be left for the occupation of the general practitioner; and it becomes a grave question as to the final outgrowth of this division of labor to such an extreme degree. Many of us, after long years of practice have not seen our way clear to entering upon a specialty, and I am fully convinced that the role of the general practitioner is essential for the advancement of medicine and surgery. It will prove disastrous to the best interests of the medical profession, that all practical work shall be parceled out into these subdivisions; and hence, I would insist that the curriculum of instruction in our medical schools should be maintained so as to qualify their graduates for entering upon general practice in medicine and surgery. There should not be any provision in the graded courses of three or four years, for turning out specialists; but the preparation for a specialty should begin after receiving the title of M.D., which is only intended to indicate fitness for general practice.

In consideration of the various points presented, it may be concluded that aside from a preliminary literary qualification, the study of medicine should embrace at least one year of instruction under a preceptor, three or four years of graded courses of six months each in a medical college as a requisite for the degree of M.D.; and for those intending to practice a specialty, a minimum of one year's attendance upon a special course in a post-graduate school. Anything short of this program of studies for the medical profession, must leave the student without proper equipment for his work, and bring to him only chagrin and disappointment in entering upon the responsibilities of practice. If my ideal of thorough preparation for the duties of the physician and surgeon can be fully realized, the practitioner ought to be competent to solve the problems of pathology, diagnosis, and therapeutics, upon taking charge of a case, and not expect to learn how to treat disease by his unfortunate experience at the bedside of his suffering patient.

It is a matter for serious consideration whether any considerable number of the medical colleges in the United States are in a condition to enter upon a four years' graded course at the present time or within the near future. While the endowed institutions are prepared to assume the responsibilities of such a step, and it is commendable in independent organizations to afford the very best opportunities for the highest attainments of those who can devote this additional time to preparatory training for the medical profession, a large majority of the medical colleges cannot undertake more than a three years' graded course. They are ready to make a decided advance by the adoption of the three years' graded course; and many of them have already entered upon the curriculum of instruction on this basis. This is so marked an improvement upon the old two years' course that we should congratulate the profession upon this evidence of progress, and be content to await further developments to authorize an increase of another year. We should be satisfied to let well enough alone and not run the risk of disaster by such a great change so suddenly.

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Although the present constitution of New York puts it in the power of that State Legislature to wipe out the old and much abused coronorial system, very little progress has been made. A bill has been introduced and shelved at the instance of the present officers, on the ground that the latter should have an opportunity to "examine" the bill. The bill, if accepted, will be very far from satisfactory to the reform element that has in view a complete substitution of the old system, by another resembling the medical examiner system of Massachusetts. There are now four coroners for New York County, with a salary of $5,000 and $3,000 for expenses. If the new plan is adopted there will be, after the term of the present officers shall have expired, one coroner at $10,000 and a like amount for expenses and clerk hire. The most important feature of the bill is one that authorizes the coroner to appoint six qualified physicians as medical examiners at salaries from $3,000 to $5,000. Coroners' juries will be abolished. An inquest will be held by the coroner with a stenographer present to take down the evidence.—Jour. Amer. Med. Assoc.

OBSTETRICS—AS PRACTICED IN THE MOUNTAINS OF NORTH GEORGIA.

By T. M GREENWOOD, M.D.

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When we think of the great importance of this, one of the fine arts of our profession, and look at the vast amount of literature (the product of the greatest talent of the world) that has been contributed, from time to time, on this subject, it is no small wonder that any people would look upon it as a mere commonplace thing and treat it with such utter indifference—dealing with it in so trivial a manner. Perhaps more than half, if not two-thirds, of the obstetrical work in this section of the country is done by midwives, called here, we suppose, as they are called in all parts of the country, by a multiplicity of names, such as "night-riders," "graneys," "minute women," "sheriffs."

Coming, as they usually do, from the more humble walks of life, it is seldom that we find one of them who can even read, knowing nothing of the responsibility resting upon them, and caring less, so far as the remote results are concerned. They have as little knowledge of the "germ theory" as a Hindoo has of theology, and have a total disregard for anything like ordinary cleanliness. Yet they are regarded by .the illiterate class, from which they usually come, as the great panacea for all ills, but regarded by the more enlightened element as a sort of "makeshift."

Their armamentarium consists of almost every species of herbs ("yarbs") indigenous to this latitude. With the exception, perhaps, of those known to possess some medicinal virtue, every variety is looked upon as possessing some virtue peculiar from the others, and must be gathered in a certain place, on special days of the week, and if barks are gathered they are "skinned" up or down, with special reference to the effect these persons desire to produce by its use. In short, all their doings are with the same superstition as that of the ancients. They will never yield a point, and, when once in charge of a case, will rarely admit that anything is wrong, and are highly insulted if the doctor is sent for. Notwithstanding all this, their immediate results are not altogether unsatisfactory. This can be better illustrated by the following: I was called to see a lady some ten miles away, who had been in labor for two days and nights. I found her completely exhausted in the hands of a midwife, who assured me with emphasis that "the woman is all right, and only lacks time—nothing wrong." Among the many contrivances she had brought to bear the following was the most striking: The child's head, which was presenting naturally, had failed to enter the "bones," she said. So taking a sheet and folding it lengthwise, the midwife passed one end under the patient, bringing it up and passing it over the opposite side, decussating the ends just above the child, giving each end of the sheet to an assistant whose duty it was to draw forcibly the loop, thus formed, when the pains came on, thus squeezing the child out. Well, it had entered the "bones"—child, uterus, and all—but had stopped in time, as had the pains, to prevent any serious harm being done.

Yet the results of these "graneys" in general, in this country, will compare favorably with those of city doctors within my knowledge. Many of the large establishments and maternity hospitals can but envy their results, both as to child and mother. But the remote results are appalling. Confining as they do "on the lap," digging and grabbling after the child, as does the canine for his prey when in the ground (like a dog in a "sink-hole," by Jacks!), making them "lie flat" in bed after confinement, without turning over or their clothes being changed for the favorite "nine days," or otherwise having them up in a day or so and going about their usual duties before anything of the natural condition has returned, sows subinvolution, cellulitis, pelvic abscess, and lacerated perineum broadcast in our land, filling thousands of homes with sorrow, pain, and grief. Moreover, should I speak it softly, this forms the greater part of the work of the practicing physician, and enables our specialists to build large infirmaries and crowd them with patients and fill their pockets with gold. But I have said that their immediate results are not so bad. Now let us look into some of the reasons why this is true.

Our women, as mothers, contrary to the recent teaching of a prominent laparotomist of the South, that healthy mothers are gradually "playing out" (this observation being largely confined to the cities), are nothing less than perfection in point of physical development. Their habits before puberty are all that Nature requires—plenty of pure fresh air, bodily exertion, as necessitated by their daily avocations, —clothing loose and suspended from the shoulders, diet plain and simple, but nutritious and plentiful. In girlhood they roam the fields and forests as boys, vieing with them in strength and surpassing them in many instances in the athletic sports; when suddenly puberty arrives, a change comes to them almost imperceptibly, and they are women, and very soon afterwards become mothers.

Out of the one hundred primiparae which I have attended in labor and noted the age, seventy-five of them were 18 years of age and under, the youngest being 13 years and 2 months. I have heard of a case a little past eleven. They were all normal labors and made good recoveries—the younger the better, it seems. In view of these facts, I cannot forbear to say that the writer referred to is incorrect as regards this section of country. Let it be ever so true in his field of observation, granting this, we must look somewhere for the cause, and I would suggest that colleges, corsets, and cork-heel shoes are the most potent evils the present generation of mothers are cursed with. So much for the mother and midwives.

Let us now come more closely to the subject and review the practice of the profession, which, in many respects, is similar to that just described.

As a general rule we are not notified that we will be called to wait upon a certain case and cannot look into the condition of her health, or make any preliminary preparations. Generally called hurriedly and perhaps ten miles away, when we arrive the first stage is usually far advanced, if not completed. If this is not true, the woman is out "knocking about" the house and attending to some light duties which she insists on continuing for some time—not a bad idea, for dilatation will set in much earlier and progress much more rapidly when a woman is on her feet and changing her position than otherwise. Finally, when it is deemed advisable to make an examination—which we are never in a hurry to do—the woman is asked to lie down on the lounge, or more generally the bed, as the former is not usually found in this country. Our hands are cleansed with soap and water—soap being the only thing needed as a lubricant—and then a careful examination is made, never neglecting to note the condition of the bowels. If sufficient progress has been made to enable us to map fully the position of the child, and the pelvis is normal, we rarely make anything more than a casual examination till the membranes rupture and the water escapes; then we always make a thorough examination. But the parts may fully dilate and yet the membrane remain intact. This brings us to the point of interest to me, which, henceforward, is based on my individual experience and observation of more than seven years, with 590 cases in my own hands, or in consultation, if such it can be called, with midwives.

What course shall we pursue? Shall we turn and deliver by the feet? Shall we rupture the membranes, chloroform the patient and use forceps? Or shall we give ergot and rupture membrane at the same time—either, both, or neither?

The first (that is turning) can be and is safely done, yet it is worse than useless in a normal head presentation. I would prefer it, in fact, to the use of forceps, and it is their use which, in our opinion, makes the chief point of difference in the practice here and in other sections of the country.

We were taught by our professor of materia medica and therapeutics in given cases to give ergot after the membranes had been ruptured: On the other hand, our obstetrician condemned this practice by saying that where ergot was indicated, the forceps should be used. We have tried the former with some good results, but have abandoned it. We have scrupulously avoided the latter. We have frequently been tempted to use them, but have avoided it by leaving them at home, and have regretted it in only one case where, owing to the extreme and long-continued pressure, caused, in my opinion, by the use of ergot, before the child's head had time to fully mould itself to fit the pelvis, the child was still-born and could not be resuscitated. Had the forceps been used or the ergot omitted in this case, I believe the child could have been saved. Our plan is to wait for the membranes to rupture—a reasonable time, and a reasonable time in a case of labor is a long time—and if the second stage sets in and they do not still rupture, then we rupture them by a very small puncture and then wait. Should the parts become relaxed, the membranes remain intact and second stage, or bearing down pains, fail to set in, we invariably rupture them, and have never regretted doing so. In our opinion the great trouble with most accoucheurs is a lack of patience. In a leading literary journal, some time ago, appeared an article under the heading "The Lost Arts," in which the writer gave patience as one of them and dwelt at length upon the subject, showing in many instances where the ancients surpassed us in this regard, dealing more particularly with the arts and artisans. Going, however, into the sciences and literature, he showed how our boys attempt to accomplish in from one to three years, an amount equal to a lifetime with them. Our chief plan, then, is to wait; but be sure that there is no abnormal condition. We are loath to believe that the race has deteriorated: let other sections speak for themselves.

We see no reason why a physiological act (as this must be one) should be so often converted into a pathological one. But 48 or 52 hours are more than the average doctor cares to devote to one case, when his fee (as is custom in these mountains) is only $5.00, besides all the discomforts of the average home of the ruddy mountaineer.

Without any desire to reflect upon the practice of our friends, we might add, before dismissing this point, that the forceps are not entire strangers in this country. We know of two young men who practice in adjoining neighborhoods, both graduates of the same school that the writer has the honor to claim as his alma mater, who for the past two years have had 15 forceps cases which were very well handled, and with a mortality greater than the whole seven years which we have passed.

We do not care to go into the various methods that are practiced to increase the pains—nothing would be gained thereby. Granting that the labor will terminate normally (that is, without instruments) and with perfect safety to both mother and child, this brings us to the third stage; but before discussing it, we will give briefly the manner in which the child is usually handled by the midwives. The cord is immediately cut a little further from the umbilicus, leaving more of the cord than is done by the profession. It is not uncommon to find a cord left four or five, or even six inches in length. A large soft cloth is then well scorched, smeared with lard, a hole burnt in the centre, and the cord drawn through it, when it is folded well about and left on top. But before this is done the child is thoroughly scrubbed with soap and water, not uncommonly lye or soft soap. It is dressed and invariably given a dose of castor oil—sometimes a piece of fat meat to suck, and then put to bed with its mother, seldom being put to the breast until the milk appears. In our opinion this part of the practice should be more strongly condemned by the profession, and the sooner it is entirely abandoned the better for the child. We will not stop to assign any of the many reasons to support this assertion.

The mother is put to bed and allowed to remain there half-starved for the favorite nine days, when she is taken out, and her clothing changed for an out-and-out suit which has been well dried and smoked over burning bran or meal, when, if all is well, she goes about her usual household duties.

But this does not always come about so easily. A form of septic fever may and frequently does occur—the result, in part, of the manner of handling as above referred to, and in part to the way the third stage is conducted. The midwife does not seem to have any special plan of proceeding in this. She has a great horror for the thought of introducing the hand, but "will do almost anything on the outside—but never go in."

Our plan, after the child has been delivered, is to resuscitate it before the cord is divided, if easily done. We cut the cord an inch or so long, and tie it with soft cotton twist. We have tried several plans of management, all of which have been more or less successful. We now cut or burn a hole through a soft piece of linen, preferably old, and always clean, draw the cord through, folding it neatly around, and laying it up and a little to the left. We use no ointments, no antiseptics and have had no serious trouble since using this method. We do not wait as long as is usually directed in the text-books to complete the third stage of labor, and have always found waiting to add to the trouble if not to the danger. We proceed at once, after having attended to the child (handing it to the nurse) after the method of Credé—using more force with the hand on the abdomen, the womb is more firmly grasped than formerly. With the womb firmly between the thumb and fingers, there is little or no danger in drawing on the cord with some force, if we only cease to draw at the proper time. Eversion by this method never occurred in our hands, and may be more theoretical than otherwise. When the contractions set up and the placenta is expected, the membranes may or may not come entirely away,—a small amount of which, if left in the uterus, can do more mischief than anything with which we are familiar and is the prime cause of a large per cent. of the bad recoveries in the country. To avoid this we draw the tumor very slowly from the vagina, through the ulva, finishing by so gently withdrawing what follows after the main portion that not a single shred is allowed to remain. This properly done we never introduce the hand, or even the finger, or use any wash. Should there be any doubt as to whether or not any laceration of the perineum has taken place, we prefer to give it an ocular inspection. The usual rules of thorough cleanliness are enforced, the woman being made as comfortable as circumstances will allow. The following instructions are given: "Put your child to the breast as soon as you are sufficiently rested. Do not allow it to have anything—not even tea—unless it becomes sick, then call the doctor to see it. If there is no action of your bowels in twenty-four or forty-eight hours, take a teaspoonful of 'salts' dissolved in hot water and repeat every hour or so, till an action is obtained. (We have abandoned giving oil.) Eat whatever suits you omitting such vegetables as are hard to digest or are likely to cause colic in you or your baby. After two or three days, or after the milk has appeared in your breast, if you have any deeply seated soreness situated in the lower part of the abdomen, a dull, heavy headache, with sweating or any bad odor about the bed, let me know it, provided these symptoms do not pass off after the free use of the 'salts.' (Unless this takes place we never see them as a patient in this case any more.) Remain in bed at least ten days."

Out of 590 cases we have seen most of the various presentations. Of breech we have had four and one death caused by pressure on the cord. We have seen the head presenting in almost every imaginable way, but have always succeeded in getting it corrected into one of the more favorable presentations, and have then delivered. Only three shoulder and transverse presentations have occurred. These were all changed to head presentations without introducing the hand,—one excepted, in which case we introduced the hand and brought down the feet, the so-called spodalic version. Our footlings proper have been but two.

Puerperal eclampsia, judging from our cases, is of rare occurrence in this country. Two cases are all that have fully developed. In several cases we have had symptoms pointing to this much dreaded trouble, which have subsided by the timely use of the Griggs treatment, either with or without chloral: i. e., varatrum and morphine combined and given hypodermatically. Only one case failed so far to yield to this as to necessitate active interference. She was a woman 28 years of age, the mother of one child, and mentally was very weak. Her husband had left her with no promise of return. It was near the close of the eighth month of gestation that I was called to see her, on account of a severe headache early in the morning. The feet were swollen, which led me to suspect eclampsia. Chloral was given and ordered to be repeated, with instruction to let me know in the afternoon how she was. About 1 P. M. I was sent for in great haste. I found her in convulsions. After trying the varatrum and morphia to no avail, I put her under chloroform and sent for assistance. After the arrival of the assistant we continued the chloroform and proceeded to dilate the os, which we found firmly contracted, with no pains. It was dilated with the finger until the hand could be introduced. The child's feet were grasped and brought down, and the labor was completed without the use of instruments. The child had been dead for several days. The vagina was washed out with a bichlorid solution—only boiled water being thrown into the uterus, and a very small quantity of it at that. The chloroform was withheld, and the woman allowed to come out. The convulsions did not return, and she made a good recovery with no rise of temperature, and was up in two weeks.

Asepsis and antisepsis have been extensively practiced in other parts of the world, but neither had been used to any extent in this country when we began the present record. It had never been heard of, and dates with us. Quite well do we remember the first time we were called to see a case of puerperal fever, with one of our best practitioners, who, when we suggested that a vaginal douche of a weak solution of the bichlorid of mercury should be given, was almost dumfounded and exclaimed, "That is poison!"

For about six years the douche, the salts, with opium occasionally when indicated, and calomel in certain cases, have constituted the basis of our constitutional treatment. Externally we apply turpentine stupes, the same as in typhoid fever, very hot and renewed sufficiently often to keep them so. Later quinine, iron, and strychnine are administered with stimulants when necessary. This may not differ in any respect from the general practice in other countries, yet the mortality has been nil in our hands, with only one death in consultation. Surely our women do not have such grave attacks as other women in other sections, or they can withstand more of this, as they have less trouble in parturition. Certain it is there is a difference. Out of the whole number attended five children have been lost, as accounted for in the foregoing, except one which was a monster and only lived a few minutes. Development had been arrested in this case by escape of the liquor amnii during gestation. What more could we add as proof of what has been written, and in justification to ourselves of the methods practiced, though they be ever so poorly set forth in this paper, than to tell you we have not lost a single mother? Surely the methods are ideal, or this is the most God-favored land in the world in which to perpetuate the race.

This is a day of scientific research. Men are making rapid strides in every department of science. Ours is the one above all else needful to perpetuate a great nation. There is no such thing as stop with us. Therefore we must go forward—we cannot go backward.

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A decision has recently been handed down from the supreme court of a State that the attending physician is the one to properly judge of the number of visits necessary. The defense was that if a physician attended a patient more times than he was asked to do, he must prove the necessity of so doing. The court decided that it would be a dangerous doctrine to require a physician to prove the necessity of each visit before he can recover for his services. The physician alone is the proper judge in such matters.—Pract. Med.

HOANG-NAN, AND THE PALLIATIVE RESULTS PRODUCED BY ITS ADMINISTRATION IN CANCER OF THE TONGUE.

By Wm. DULANY THOMAS, M D.

Baltimore.

Hoang-nan (strychnos malaccensis) is a plant of Asiatic importation, indigenous to Malacca and Cambodia (Camboja). The part employed is the bark, usually administered in the form of a pill containing three grains, or concentrated tincture in the dose of three to ten minims. My method, however, has been to commence its use in five to fifteen minim doses, three times a day, and to increase gradually to twenty-five or thirty as the treatment progresses. This guarded employment of the remedy is not an unnecessary precaution, as the case reported by Dr. E. E. Perkins, of Indiana, will show. The doctor was treating a case of cancer of the breast in a patient 64 years of age, and considering Hoang-nan as the drug indicated, commenced its use in one-grain doses of the powder. No unpleasant effects were produced until the dose of three grains three times a day was reached, when the patient was "seized with vertigo, dryness of the mouth, cold hands and feet, difficulty of breathing, trismus (which was the most alarming symptom), violent jerking and twitching of the muscles, and opisthotonos. The spasms were accompanied with great pain, and were excessively violent. Thirst was intense, and there was much difficulty in deglutition." In conclusion, Dr. Perkins states that "under the use of one to two-grain doses three times a day, the condition of the breast is improving."

A chemical analysis of Hoang-nan reveals the presence of brucia and strychnine, and accounts for the great similarity between the symptoms produced by poisonous doses of this drug and strychnia. Livon, Professor of Anatomy and Physiology in the Ecole de Médicin at Marseilles, has made twenty-five experiments with the tincture of the bark upon frogs and dogs, and gives as his conclusions the following: "Hoang-nan would seem to belong to the strychnos family, although differing slightly in its effects from strychnia or brucia. The action of strychnia shows itself in a general manner all over the body. In the case of Hoang-nan the tetonic convulsions begin always in the hind legs of the animal, and, gradually spreading over the entire body, become general. In the case of brucia, the contractions are more vigorous after death than at the time of death itself; the animals poisoned by Hoang-nan show movements after death, but only for a short time."

The antidotes of poisoning by Hoang-nan are similar to those employed as strychnine antagonists, viz., chloral, tobacco, chloroform, inhalations of ether, etc. Emetics or the stomach pump should not be overlooked.

Hoang-nan has been employed as an alterative and spinant. Administered in medicinal doses it is said to possess "an alterative effect upon the sebaceous glandular system, stimulating their activity if repressed, or restraining it if excessive, at the same time improving the quality of the secretion." As a general tonic it invigorates the nervous system and strengthens heart action. Like nux vomica, it will be found of value in dyspepsia and kindred complaints.

Morse claims that the most important use of the drug is in the "treatment of paralysis. In relaxation of the members in hemiplegia, and where paralysis is recent, this remedy is peculiarly efficacious. In rheumatismal, paludal or syphilitic paralysis it achieves important results."

Dr. John V. Shoemaker, of Philadelphia, speaks well of Hoang-nan in cases of seborrhœa, particularly of the scalp, in which situation it often leads to baldness. Pustular eczema, acne, sycosis, furuncles, and carbuncles also come in for a share of improvement accomplished through its use. In the treatment of leprosy Dr. Shoemaker does not speak so encouragingly of it as do some others. On the other hand, at Trinidad, Hoang-nan has been employed in twenty-four cases of leprosy, and improvement has resulted in all save one. The drug is prepared after the following formula:

R. Alum, 1 part.
Native realgar, 2 parts.
Hoang-nan bark, 2 parts.

Reduce the whole into powders and make into pills weighing each 25 centigrammes.

Favorable reports, likewise, come from the use of strychnos malaccensis in venereal diseases, serpent bites, hydrophobia, epilepsy, convulsions, brain fag and cancer. Personally, I have been gratified with the effects produced in the treatment of acne, inflammations involving the nasal mucous membrane, and cancer. In support of the latter assertion I wish to report a case of cancer of the tongue, although the idea is not meant to be conveyed that in Hoang-nan we have a specific for cancer, but simply that it appears by experience to have marked palliative effects, and to be worthy of attention. Reports of cases treated with the drug are few, and my object in reporting the case stated in this article at some length is that it may induce further investigation as to the value of Hoang-nan; and if found to possess the merit claimed for it, lead to its more extended use.

Although my case has steadily grown worse, the patient has frequently expressed himself as more than pleased with its palliative effects.

Mr. E. first noticed an inflamed spot along the alveolar process, corresponding to the region of the first molar, during the summer of 1891; and, although an excessive smoker, does not attribute its cause to this fact, and I am myself inclined to a like opinion. Setting this aside as insufficient evidence in this case, we must look for some agent more conducive to causing a primary inflammatory area than tobacco; although my belief is that this drug is particularly prone to set up injurious systemic results, and in certain individuals the initiatory cause of malignant buccal disease.

During the summer of 1891, while away from home, Mr. E., in endeavoring to masticate a portion of meat, remembers injuring his gum by a spicule of bone; but as a very slight inconvenience was experienced at the time, little was thought of the wound, and it was some days before it caused sufficient discomfort to be noticed. As time passed on it became his habit, in order to secure relief from pain, to pick the gum, and as the act was successful in this particular, it was renewed whenever in his mind the cause justified the means. Thus the case proceeded from bad to worse.

I saw Mr. E. during the early fall of 1892, and at that time, in the region of the space formerly occupied by the first molar, was an elongated mass about the size of a hazel nut. As it was not a case difficult to diagnose, the verdict was soon rendered, and the caution enjoined upon him to cease his former practice of pricking the spot for relief. I at once put him upon systemic treatment, and advised that an operation be not performed. No improvement subjectively or objectively was noticed, and I abandoned my former efforts and placed him, February, 1894, upon the use of Hoang-nan. At this time the disease had affected all the border of the right side of the tongue, around to the left side, and the tongue was so much swollen that it was impossible to take solid food. The disease had apparently made an attack upon the back part of the tongue, which was so much enlarged that at times it was only with great pain that he was able to articulate so as to be understood. The edge of the tongue presented a torn and broken appearance, and had extended so as to cover the front teeth in part. On the right side the growth had entirely covered the gum, and it appeared as if the tongue had become attached to the jaw.

Commencing with ten drops of the drug three times a day, the dose was increased in five days to fifteen drops, when the part became softer and the swelling reduced. This dose was continued for five days, and then increased to twenty drops, and in the language of the patient, "the change was very apparent. On the right side the growth commenced to disappear, and pain from the gum. My tongue also decreased in size, so that I could eat with much ease and swallow as naturally as if there had been no disease." This dose—thirty drops—was continued for one month, when the patient again expressed himself as follows: "On the right side, where the disease commenced, the gum is entirely uncovered, and the broken and pointed edges of my tongue have disappeared, and present as round and natural an appearance as they ever did. I have, perhaps, had more soreness of my tongue than usual for the few days past, but not more than I have occasionally had." Once more taking the patient's own statement of his case from a diary kept by himself, we notice that on March 13th, " the tongue is sore and the wounded edge appears to be much thicker; however, there is but little pain on the side where the gum is exposed. I find this evening I can move my tongue a little.

"March 15.—Tongue more swollen than for some days. On the left side, where it has been soft and flabby, it is getting firmer. Can move the tongue with ease.

"March 18.—No particular change except that the tongue is not so soft.

"March 19.—Tongue considerably enlarged and raised above the teeth, as if it had been loosened, or had sprung up. Cannot bear the plate in my mouth; the point or left side seems to be softer than yesterday, but very sore. Have had considerable more pain in my head than for some days.

"March 21.—A very considerable change on the left side; the lump has become soft and reduced in size. Tongue not so much swollen and looks healthy; less pain in my mouth.

"March 22.—A very marked change in appearance of the lump on left side; considerably softer; also the tongue is softer on that side; have had less pain on right side.

"March 23.—The tongue has been considerably swollen, and on the left side, beyond the point, it has become firmer, and seems to be filling up; have had some bleeding during the day, with considerable pain.

"March 25.—No marked change until evening, when the swelling decreased, and tongue became softer. Have had very little pain in my head, but much soreness in my mouth, occasioned by having bleeding spells during the night.

"March 26.—The tongue has been considerably swollen and very hard; the point on left side has shown more inflammation, but no increase in size.

"March 27.—Tongue shows much less swelling, and is much softer; it has settled down below the teeth, but I have not the same control in moving it; at the point it looks more healthy, and shows an improvement. Have not had as much pain yesterday nor to-day as usual.

"March 29.—Tongue very soft, except in the middle; no swelling during the day; the lump on left side appears to have diminished very considerably, but shows some congestion.

"April 4.—Since the last entry there has been no particular change. The softening of the tongue has been slowly but steadily progressing. On the left side the lump has decreased very much, and presents a very healthy appearance.

"April 9.—The tongue is very soft and the hump has become very small; every part looks healthy in appearance.

"April 10.—During the past twenty-four hours there has been a considerable change in my tongue. During the night my tongue was very much swollen, which had not occurred for several nights; after that it became soft again, and I have had more use of it—being able to move it quite naturally. The lump on left side has nearly gone, and am not troubled with much soreness.

"April 12.—During the past night and early part of the day, the tongue has been considerably swollen and sore; this evening the swelling has subsided very much; the left side shows some inflammation; have had considerable pain in my throat, with some difficulty in swallowing; more pain than usual in my head and left ear.

"April 14.—Tongue has been much enlarged during the night and day, with more than usual inflammation, until toward evening. Have had more pain than for some months in head, ears and throat. Have increased the dose to thirty drops three times a day.

"April 20.—Tongue has become very soft, not only on the edge, but in the middle, and the pain on left side has decreased; have had no pain on right side for several days, and more use of the tongue. Pains in the head continue without abatement.

"April 25.—Have experienced much pain, with burning sensation in the mouth, and much pain on the right side, with occasional bleeding; have suffered more pain in head and ears than usual.

"April 27.—Tongue has assumed an appearance as before the 26th, that is, the swelling has decreased, with less inflammation."

The patient presented much the same history up to September 30, when the upper right quadrilateral portion of the tongue rapidly necrosed, having as its starting point the center of the tongue.

October 13, a severe hemorrhage occurred from the right side in the immediate neighborhood of the primary location of the growth, and almost proved fatal. Since this date he has ceased using the remedy and remains in much the same condition as he was three months ago, as far as the local appearance is concerned.

No doubt can be expressed as to the correctness of the diagnosis in this case. Microscopically, the growth in its early stage presented giant cells in abundance and gave every promise of a short career.

While the report of this case is not sufficient evidence in itself to prove conclusively the efficacy of Hoang-nan in carcienoma, nevertheless the alleviation produced was decided enough to justify an early administration of the drug in future cases which may come under my supervision.

611 N. Carrollton avenue.

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Our esteemed contemporary, the Maryland Medical Journal, in recently commenting about state boards of medical examiners, makes some statements that we feel compelled to challenge. There is, perhaps, wholesome truth in its assertion that these boards have been made necessary by the lack of the moral tone in college faculties. But when it asserts that there is an element of injustice in compelling a man to put himself a second time in peril of his future medical life after he has won his college diploma, we are of the opinion that it is a criticism which will not meet with general approbation. Does our Maryland contemporary think it is an injustice for a physician to be called upon to take a separate examination if he desires to enter the army or navy? Does it also think there is an injustice in requiring separate examinations for hospital appointments? Surely the people of the state at large are entitled to quite the same degree of protection as our soldiers or sailors, or patients in hospitals. If it is wrong for the state to require the examination in the one case, it is equally so for the authorities to demand it in the others. We are sorry to take issue with the Maryland Medical Journal, which is so seldom at fault in its judgments and opinions.—Buffalo Med. Jour.

TRANSLATION.

REMARKS UPON APPENDICITIS.

By Dr. L. G. RICHELOT.

Translated by H. McS. Gamble, Ph.D., M.D.,

Moorefield, W. Va.

Is it true that the nature of appendicitis is still in doubt? Our esteemed instructor, M. Millard, is not one of those who keep open table for the entertainment of modern acquisitions. Nothing in his lecture before the Societe Medicale des Hopitaux (23 Nov. 1894), contradicts recently reported facts. The term "perityphlitis," which he prefers is just in itself and antagonizes no opinion. His diagnostic views are rational and free from subtleties. His confidence in the medical treatment is somewhat exaggerated, but is exempt from exclusiveness; with him, we are opposed to systematic intervention.

And, yet, there has just passed over our heads something like a gentle breeze of reaction which has caused us to take up our pen.

Is it true that the story of "stercoral impaction" still has its partisans? Yet, I believe it is well established that it is the appendix which is involved, and that the original conception of Albers has had its day. The appendix is the more generally free and floating in the peritoneal cavity, and, when it becomes inflamed from the presence of fecal conditions, or of foreign bodies, the disorders that it determines, formerly known under the name of "phlegmon of the iliac fossa," are those of a local peritonitis, adhesive in slight cases, suppurative and circumscribed in moderately severe cases, generalized and septic in cases of rapid perforation. There may be pus in the cellular tissue, because of the varieties of location of the appendix, but this is not the rule. But, if the autopsies of former times, and above all the operations of to-day have demonstrated these facts, it must be confessed that they are not always demonstrable, because there are benign appendicites that terminate by resolution, and when the physician, wisely temporizing, confines himself to verifying the cramming of the right iliac fossa, it soon diminishes and is effaced. Look at it, intestinal impaction! The cæcum was full and is now empty; where are your foreign bodies, your perforations, your peritonites? No one can say, because no one is going to look in there.

Is it true that one can make a diagnosis between a typhlitis and an appendicitis? The Societe Medicale des Hopitaux seems to think so; impactions, catarrhal typhlitis, perityphlitis of cæcal origin, appendicites, come to range themselves complaisantly in an order that seduces the mind. I have elsewhere read a lecture by Rendu, which develops these ideas with an astonishing precision. "In typhlitis there is observed a tumefaction having rather the appearance of a diffuse atmosphere of impaction, resistant, immobile, pudding-shaped. Appendicitis, on the contrary, presents a small spiral tumor, situated lower down, directed transversely, sometimes mobile, at other times immobile and susceptible of being surrounded by a considerable swelling. The former affection is relatively mild, even when it is complicated with perityphlitis; appendicitis is much more serious, for intestinal perforation is a great menace." In speaking thus, Rendu—may he pardon me—makes a purely schematic distinction between the mild forms, of which he has made no post-mortem examination, and the more serious forms which have a surgical evolution.

In order to be satisfied with these distinctions one must never have done any abdominal surgery, or know to what extent and how often the subtleties of an ambitious diagnosis are reduced to naught by examination of the lesions. The best diagnosis is that which leads to the indication by the shortest road. The trouble makes its appearance insidiously, or suddenly, by a sharp pain referred to the right iliac fossa, but there may remain some uncertainty upon this point. There are attacks of reflex vomiting, a little resonance over the whole abdomen, swelling, peritonism; upon exploring with care, the pain is localized; the thickening is felt, and the diagnosis is made, thoroughly made, without looking for a knot in a bulrush. What remains now is the course to pursue; is the storm going to subside and resolution supervene, or, the local phenomena becoming aggravated, will one be behind time for the prevention of dangerous ruptures and general infection? As to inquiring whether he has to deal with the cæcum or the appendix, one is acquainted with the description of anterior cases, and with the books in which is written what everybody now knows or ought to know. It is the appendix, because we know that it is this, because, save some exceptional cases of pins or fish bones which may be implanted in the cæcum as well as elsewhere, to the lesions now known there corresponds a determined clinical evolution which ought no longer to surprise anyone.

There is, however, one form of typhlitis which has over the above mentioned typhlites the advantage of existing, of being even quite frequent, more frequent than it is said to be. But it is just of it that the Societe Medicale des Hopitaux has not spoken. So, since they were occupied with the diagnosis, it was not profitless to remember that tuberculous typhlitis may assume features that cause it to resemble ordinary appendicitis. Besides the massive tuberculosis of the cæcum, forming large tumors which have been confounded with cancer, there is a very special one, well circumscribed and without diffuse lesions, which I have touched with my finger and twice cured by a partial resection of the intestinal wall. Lasègue said that recurring perityphlitis ought to suggest the idea of tuberculosis; and I believe that many operators opening an abscess of the iliac fossa without clearly seeing the cæcal wall or finding the appendix, have erroneously thought that they have operated for ordinary appendicitis. Among the patients whom I have treated, several have appeared to me suspicious in this regard. I have encountered collections of pus and appendices which I now regret not having more thoroughly examined. I have still under observation some subjects who have entirely recovered after incision of their abscess, but whose iliac fossa is not clear, and whose appearance or antecedents inspire some apprehensions. I have considered these cases in a communication upon common appendicitis and tuberculous typhlitis (1), in which I show the latter to have been too much neglected since the first examples collected by Blatin, Duguet, etc., to have been forgotten by the English and the Americans, although they have operated upon a large number of cases of chronic appendicitis. In the Societe de Chirurgie, they knew of the large tumors removed by Terrier, Bouilly, taken at first for sarcomas and described by Pilliet, but they had no remembrance of the opinion of Lasègue; they seemed to ignore these localized tuberculoses of the cæcum, the successive exacerbations of which may legitimately lead to the extirpation of the tuberculous focus, followed by a complete and lasting cure.

The misfortune is that, in such conditions, that is to say in the absence of any diffuse lesion of the intestine and of a confirmed pulmonary tuberculosis, the diagnosis is very difficult. If it was easier, the conduct of surgeons would be better regulated and the interposition less controverted in a certain number of appendicular colics of insidious march. It is necessary then, in order to divine the lesion or to recognize it in time, to keep the fact present before the mind that it is not very rare, and that it is confounded by its clinical evolution with ordinary inflammatory lesions; it is necessary to always think of this in relapsing cases. These facts, but little known still, if I am not mistaken, deserve to attract attention, and I desire to recall the fact that they were reported for the first time to the Societe de Chirurgie in March, 1892, with clinical proofs and operative details.

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(1) *Société de Chirurgie*, 23d March, and *Unión Médicale*, 2 and 5 April, 1892.

A word as to the treatment. Shall we regard surgery as the ultimo ratio to which one is resigned against his will, at the risk of practicing the "surgery of the dying," or see in the operation a method which may be the best and deserve to be selected, even when we are not compelled to act?

M. Millard is a hundred times right in saying that many appendicites get well entirely of themselves, and that we ought frequently to abstain from action. But this must be said above all to the Americans, who take away your appendix for the slightest pain in the side. If this is said among ourselves with too much insistence and as an amendment to the rational propositions which the surgeons have given out in these later times, to what extent will go the craze for abstention on the part of the physicians who demand as a ground for action, that the pus shall be under the skin, and before the eyes. Oh! the temporizing in diseases of the abdomen! Here is in the first place a case in which I hope not to be contented. Sudden perforation of the appendix into the peritoneal cavity. I have often been called in because of "intestinal occlusion;" nothing could be discovered but the distension, absence of stools and vomiting; pain in the right side was not observed. But what is embarrassing, is the course to pursue; called frequently on the second day, the physician carefully prepares those about him, calls a consultant, who should be a physician in order to avoid causing any fright. The following day, they deliberate; the disease seems to assume a "surgical phase." And I arrive on the fourth day at the earliest! The family is smiling and breathes again, for the patient has been comfortable for some hours. He possesses a perfect lucidity and replies to questions; but his hands are cold, he has no pulse. Who has not seen this distressing optimism of the latter hours of life? When I announce the issue, everyone is stupefied; the physician informs me that "the situation has changed very much since yesterday." Alas! it ought to have been recognized four days ago.

We have some authenticated successes of operations done about the first or second day, which impose upon us the duty of early intervention; the more so as the appendix is not always perforated. The 24th of December, 1890, a man thirty-eight years of age came into the hospital, in a condition of the gravest character. I performed laparotomy on the 25th; I found a generalized peritonitis, false membranes and layers of concrete pus upon all the folds of the small intestine. The appendix, the point of departure and center of the lesions was enormous, gorged with muco-pus, but without perforation; I resected it at its base. Prolonged washing of the peritoneum with salt water, drainage of the abdomen, and finally recovery. Here was an interesting example of generalized peritonitis in consequence of an appendicitis without perforation, and of grave peritonitis cured by surgical intervention.

Let us now see to what extent we can recommend abstention in cases less threatenting. A few weeks ago, my colleague Hallopean called me to a young man who had just been taken suddenly with a sharp abdominal pain, vomiting, and peritonism. The pulse was good, the facies not altered, the belly was almost normal, scarcely distended and the vomiting continued only that evening and part of the night. The pain, diffused at first, became localized to palpation in the right iliac fossa, a slight engorgement was beyond doubt and the diagnosis was made. Neither Hallopean nor myself had any idea of interfering at once. Then the situation remained good, the vomiting did not reappear and the pain diminished; the deposit persisted for a long time, without fever, to disappear little by little under a severe regime and rest in bed.

Here then are benign cases, fortunately sufficiently numerous to enable us to affirm the efficacy of "medical treatment;" but between this and saying that it suffices in the majority, in the "immense majority" of cases, there is some difference; and the Societe Medicale des Hopitaux, in saying so by the mouth of some of its members, has itself laid down the principle that, if there is pus, it is dangerous to temporize. But the suppuration is precocious, rapid; when is it produced, when shall one believe it present, at the end of forty-eight hours, of three days? In truth, I know nothing about it; but I know that it is necessary to be a clinician, to know how to regard the patient, to understand how the disease progresses before fluctuation is felt. There are, we are told, some patients who get well by resorption of their purulent focus; so much the worse, for these are bad examples. Too often, after a deceptive calm, the symptoms suddenly return, and peritonitis becomes general; Moizart and others have called attention to this. To wait beyond the limits of prudence, that is called "watching." What do you understand by that? To assume a gloomy air whilst waiting until the appendix bursts, and when it has burst, to shake the head and say: "I suspected it." Nice thing for the patient.

When the suppuration is evident or probable and I repeat that it is produced at an early hour—intervention is the rule, because a surgeon ought to march upon pus as a general should march upon the cannon. I wish him then the luck not to have had too many ointments and other nastiness put upon the iliac fossa.

I add that after the more or less acute crisis, in relapsing cases, and when a tuberculous focus is suspected, I am a partisan of resection à froid, that is to say when there is no inflammatory excitement, dangerous to the peritoneum. But I would have too much to say upon this point and upon the details of the management: I had more especially in view the cases of urgency, in which the principal object is to prevent dangerous symptoms by simple evacuation of the pus.

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Epithelial Changes Produced by Irritation.

D'Arcy Powers (Journal of Pathology and Bacteriology) thought the implantation of cancer into the eye might be more successful in producing a neoplasm if the eye were chronically inflamed previously. For this he performed paracentesis corneæ upon a healthy guinea-pig, and a piece of the bulbous end of a vibrissa was pushed into its anterior chamber. In three days the cornea was cloudy, and there was a slight circumferential zone of inflammation. At the end of a week the eye was clear, and the vibrissa could be seen lying on the anterior surface of the iris. Later, the cornea became hazy, and small blood-vessels ran into it from the conjunctiva. The animal was killed, the eye excised, and conserved in Foa's solution.

A variety of changes was observed in the epithelmium of the conjunctiva; these together with numerous appearances from corneal implantations of the vagina, are well shown in a series of microphotographs.

Many of the bodies enclosed in the cells figured resemble what have been described by various observers as protozoa, but are explained as appearances due to cellular degeneration, to phagocytosis, and to the entrance of leucocytes into the cells, where they may be digested or may degenerate. Occasionional red blood-corpuscles are also described as present in the cells.

Attention is directed to the resemblance existing between the described malarial parasites and the bodies found in the irritated cells.

The writer concludes that our present state of knowledge is insufficient to enable us to discuss the problem of the microbic nature of cancer, and that all our endeavors should be first to acquire a thorough knowledge of the peculiarities of the epithelial cells.—Univ. Med. Magazine.

SELECTIONS.

THE CARE OF THE INEBRIATE.

This question comes more and more frequently to every general practitioner in the country. Within a comparatively recent period it has become a well recognized fact that the inebriate is diseased and curable by medical means and measures. The class of cases curable and the exact remedies and appliances for this purpose are not so well defined, and like all other new questions is open to some differences of opinion.

The appeals of friends and relatives of patients, and even of patients themselves, to the physician for help are touching and very urgent. In some vague, half-defined way the average medical man may recognize the possibility of help from drugs, but the uncertainties of medicines and this doubtful knowledge turn him to ethical and moral lines of treatment. He gives placebos and severe lectures to the patient, threats, warnings, appeals, and accepts pledges and promises. He may go beyond this and administer secretly, medicines to produce nausea, or narcotics to check the morbid impulses. In one case a disgust for spiritis is expected to give power to abstain in the future; in the other, checking the drink craze is supposed to destroy it. The latter is always diastrous in turning the drink craze into other and even more incurable channels. Many good physicians, in despair of other remedies, have turned to morphine by the needle, and secured temporary relief, only to find that, later, morphinism was developed. Chloral, cocaine, and many other drug habits have begun in this way. The not infrequent failure of the family physician to successfully treat these cases, has opened wide the door for quacks and quack remedies.

The wild wave of gold cure specifics was only possible through the failure of physicians to recognize the physical nature of inebriety, and failure to give these cases the care and attention they deserve. Some few physicians seemed infected with the charlatanism of the secret gold cure remedies, and believed the loud boasts of supposed cured victims was sound evidence of success. Such persons ignore all facts of the physiologic action of certain drugs, and psychologic laws and forces, and manifest credulity that reflects sadly on their scientific training. While the injuries and diseases from the use of spirits and drugs require a considerable part of the physician's time and work, he has most unfortunately not studied the physical side of inebriety, but been content with the half moral and half physical theories of reformers and non-experts. As a result he is unable largely to do anything or even to advise soundly as a scientific man. Theories of inebriety and alcohol popularly held to be true, do not bear the tests of accurate inquiry, and opinions that are without any bases of facts are repeated from side to side as if beyond question, when in reality they are simply delusions. The few men who have made a study of this problem in many circles are still called cranks and extremists, while the positive dogmatist, who claims full and explicit knowledge on all phases of this subject is the medical hero of the hour. An ever-increasing number of thoughtful men in the profession begin to realize that this drink problem has a very important medical side which when carefully studied, will enable the physician to answer the despairing cry: "What can we do with the inebriate?"

The physical study of the inebriate (whose drink craze is a symptom), of distinct conditions and causes that can be known and prevented, is the only true road to successful treatment. The physician must realize that appeals to him for help come from organic suffering, the same as in other diseases. It is not damaged morals and ethics of conduct; it is a cry for relief from a morbid impulse to suicide, and to escape the injury from alcoholic poisoning. If each case is studied as one of disease, the remedies and means of relief will be apparent. Medical colleges should take up this subject and give its advanced students some instruction along this line, for inebriates are often among the first persons they will be called to treat.

Physicians who have studied the inebriate along lines of exact science, are agreed in asserting that the successful treatment of the inebriate should be begun by the family physician at home. That the physician should be able to prevent and cure the inebriate in the early stages; and in the near future this will be done with as much certainty as other diseases are now treated. This is confirmed by the experience of practical men in individual cases everywhere. It seems a reflection on medical skill that these armies of inebriates should grow up and go down to destruction in every town and city of the country, with no help from medical art. The few small asylums where these cases are treated, are practically lost and insignificant in the scope and limits of their work.

The boasting charlatan occupies the field with his specifics, and the wilder dogmatists and reformers, are struggling to reach this disease by the pledge, the prayer, and the promise. Evidently the answer to the appeal for help, addressed to physicians everywhere, must come from a great revolution of public sentiment in regard to the inebriate and his malady. In the meantime, physicians should study these cases more earnestly, and seek to know the causes and means for relief that are only possible by accurate study. Then this question can be answered, and a new field of cure and prevention will be opened.—Jour. Am. Med. Asso.

THE KEELEY CURE VERSUS THE RATIONAL TREATMENT OF INEBRIETY.

The superintendent of the Hartford Retreat for the Insane, Dr. Henry P. Stearns, in the seventy-first annual report of that institution, just received, makes public facts and statistics of the greatest interest in view of the recent attempts made in various States to influence legislation in favor of the Keeley Cure, with the object of making its use compulsory in public inebriate asylums.

Dr. Stearns has examined the records of the Retreat for the last twenty years, and finds that of 95 patients treated during that period for inebriety, 70 were discharged as "recovered." The word "cured" is not used, and the word recovered means simply recovered from the acute effects of alcohol, and free from any special craving for it. All the patients so classed claimed that they had no desire for alcohol and were confident that they never should have such a desire. The superintendent justly states that a "cure" cannot be claimed from a treatment of a few weeks or months only, such as these patients had. If permanent cures are effected in such cases, they are secured after discharge, through the influence of a favorable environment, force of will, and a strong determination on the part of the patient, combined with such medicines and food as will conduce to secure this result. These favorable conditions must necessarily be continued for some length of time in order to restore the nutrition of the brain tissues, impaired by chronic alcoholism, and establish their normal action.

The theory upon which Keeleyism is founded, namely, that these elements of the nervous system can be suddenly forced back into normal action by the influence or shock of a violent stimulant or poison of another character, introduced into the system for a few days or weeks, is at variance with medical experience in this and all other forms of disease of long duration.

The claim of Dr. Keeley and the syndicate representing him that 90 or 95 per cent. of cases of inebriety can be cured in a space of four weeks has not been substantiated by facts, and efforts to secure legislation making the employment of this treatment compulsory in State institutions—especially when we consider the fact that the nature of their remedies is kept secret—are as absurd as if the proprietors of any secret remedy should endeavor to compel the use of their nostrum in public hospitals.

The claim that the Keeley patients who have been discharged as cured are in reality so, is far from proven. There are no reliable statistics with regard to the percentage of cures in Keeley patients, as the patients are received and treated by thousands, and little or nothing is usually known of their subsequent history. A slight contribution to the record of these patients is made by Dr. Stearns, since of the 52 patients affected with toxic insanity admitted to the Retreat within the last four years, 18 have been graduates of Keeley institutes. Several of them have been suicidal when admitted, and two of them committed suicide after they were prematurely removed from the Retreat by their friends.

Dr. B. D. Evans, Medical Director of the Asylum at Morris Plains, N. J., in an article published in the Medical News, May 18, 1893, presented a table of 88 cases of insanity, all of which had been treated in Keeley institutes and graduated as cured.

Dr. R. M. Griswold, of Derby, Conn., in his statement before the committee of the present legislature of Connecticut on humane institutions, presented the following figures in reference to the results of "Keeley Cures": Of 34 cases from Danbury, Conn., which have been treated by Keeley methods within the last three years, he has found 13 relapses. Of 17 cases from the towns of Derby, Ansonia and Seymour, he has found seven relapses. Of 94 cases from Norwich, New London, Rockville, Willimantic, Putnam, Windsor Locks, and Providence, R .I., he has found 42 relapses.

Several other reports of a similar nature from physicians who have had Keeley graduates under their treatment are presented.

The statement of Dr. B., who was a patient at the Retreat and a graduate of the Keeley institute, is extremely interesting.

He says that during the four weeks while he was under treatment, there was no time when he could not take liquor, and that several of the thirty-five patients who received treatment with him did take liquor every day, procuring it in the village. Patients were marshaled together in a line and given the "shot" four times a day, and "a tonic mixture" every two hours, except at night. The physician who was in charge at the time was himself a graduate of one of the institutes.

He afterwards abandoned the Keeley Cure business, and resumed the practice of general medicine, but within a year began again to take alcohol and became "a mental and physical wreck."

He further states that of thirty-eight patients who were treated with him, fourteen relapsed within a year, and of these three died of Bright's disease. He knows nothing of the subsequent history of the others, the larger portion of whom came from other sections of the country.

A letter from another physician who had also received the Keeley treatment is of similar tenor, and contains the statement that of the 33 patients whom he knew, and who were taking the cure when he did, twenty had relapsed into their old habits, some of them after taking the cure twice and even three times. The concluding paragraphs of the report contain a refutation of the Keeley methods and statistics so fair and forcible that we cannot refrain from quoting them in full.

"It should, however, be stated that the above statistics are of very little value as accurately presenting the whole per cent. of relapses of the so-called cures. The conditions are such that this cannot be ascertained. Neither those who have relapsed nor their friends are forward or, indeed, willing to advertise this fact. They rather desire as far as possible to conceal it, while only those cases which have become notorious are reported. Imperfect as they are, however, they serve to indicate that the claim that 90 per cent. of drunkards are cured by Keeley methods is without foundation; and also how preposterous is the petition that the legislature should become responsible for the treatment of inebriety by secret remedies.

"The course pursued by Dr. Keeley in keeping the nature of the supposed cure a secret, proves very conclusively that he has little confidence in himself. He does not dare to make it public, but rather prefers to trade upon the desires and hopes of credulous families and legislatures and the unfortunate weaknesses of inebriate brains. If he or any other person should discover a remedy for chronic inebriety which would effect a cure in 90 per cent. of all cases in four weeks, and make its nature public for use by all physicians, he would be hailed by men everywhere as one of the great benefactors of the race, and both wealth and honors would be showered upon him."—Boston Med. and Surg. Journal.

On April 30th the Massachusetts House of Representatives, by a vote of 149 to 23, refused to order to a third reading the bill to prohibit insurance of the lives of children under ten years of age, thus ending the matter for the present session.

PORTALS OF ENTRANCE OF TUBERCLE BACILLI.

Accurate knowledge of the causes of disease must underlie all rational preventive medicine. One of the most important factors in the prevention of an infectious disease is a knowledge of the portals of invasion of its specific germ. Tuberculosis causes more than one-tenth of all deaths, the mortality being especially large among infants. It is extremely rare among the newborn, although authentic cases have been reported. Holt recently saw a child who died when six weeks old with advanced tubercular lesions. The mother, who died at about the same time with general tuberculosis, had tubercular endometritis. The disease is seldom seen under three months. It becomes very common during the last six months of the first year, the mortality reaching its highest point during that period. It continues high during the second year, but thereafter steadily decreases year by year. It is common through the whole period of childhood, involving especially the glands and bones.

These facts lead necessarily to the belief that the disease is acquired through infection. There is undoubtedly a form of tissue soil, which favors the development of tuberculosis upon slight provocation. That this provocation is infection by a germ is the belief of all competent observers. The disease is, therefore, in most cases preventable. Effectual prevention involves a knowledge of the means by which these germs effect an entrance into the body. Much careful study has been devoted to this subject during recent years, and our knowledge upon many points has been rendered exact. Northrup has reported the most accurate observations that have been made in this country upon the mode of invasion by the tubercle bacilli in infants. He describes the following four avenues of infection: (1) aspiration through the respiratory tract; (2) ingestion, through the intestinal tract; (3) inoculation through abraded surfaces; (4) placental circulation—congenital.

The respiratory tract is by far the most common portal of entrance for these bacilli in young children. The lymph nodes at the bifurcation of the trachea present in a large number of cases the oldest lesions. Cavities, shrunken fibrous tissue, and calcareous masses are well known to be older than cheesy masses, the miliary tubercle being the most recent lesion. Experiments have shown that dust particles readily reach these nodes, but do not pass beyond them, the glands acting as a filter. It has been demonstrated that tubercle bacilli may penetrate the mucous membrane and traverse the lymph channels without causing any lesion, the first lesion being found in the lymph glands, by which their progress has been arrested. These glands make a strong effort to withstand the ravages of the bacilli, and frequently succeed. A fibrous capsule is thrown about the gland and not infrequently the dead germs are found, long afterwards, imbedded in a calcareous mass within this capsule. In other cases, the glands are not equal to the task imposed upon them, but become cheesy and swarm with bacilli. General infection from these necrotic areas results from their breaking down, and the bacilli being either swept into the circulation or discharged into the bronchi from which they are aspirated into the deeper portion of the lung.

Primary infection through the intestinal tract may occur in infants, but is not common. Milk, containing tubercle bacilli, is the most common source of such infection. It is now the belief of most competent authorities, however, that this occurs far less frequently than many have been led to believe. The mode of infection is identical with that which occurs in the respiratory tract.

Tuberculosis through inoculation, though not common, is known to occur. It results most commonly from absorption of germs by an inflamed or abraded mucous membrane of the nose or throat. The cervical lymphatic glands are in this instance the first to receive the invading germs, and act as do all lymphatic glands similarly infected. The bacilli found in these glands do not, however, seem to be as virulent as those commonly found in the bronchial or mesenteric glands. They are usually derived from the same source as those which invade the bronchial glands. They are inhaled with the inspired air, and are derived from the dry and pulverized sputa of consumptives, this being the most common source of tubercular infection in children as in adults.

Infection by aspiration through the respiratory tract so far exceeds in frequency all other modes of infection in infants, that it may be regarded as the one source of serious danger during the first years of life.—Archives of Pediatrics.

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The death of Dr. Alfred L. Loomis has led to a number of changes in the Faculty of the Medical Department of the University of the City of New York. Dr. Wm. H. Thomson is now Professor of Medicine; Dr. W. Gilman Thompson, Professor of Materia Medica, Therapeutics and Clinical Medicine; Dr. Charles L. Bristol, Lecturer on Physiology; Dr. Henry P. Loomis, Professor of Pathology, and Dr. Charles E. Quimby, Adjunct Professor of Practice of Medicine.

ABSTRACTS.

DIAGNOSIS OF ABDOMINAL TUMORS.

Dr. William Osler has recently published a most interesting series of lectures upon this subject in the New York Medical Journal. They cannot be fully appreciated in abstract, but an outline is nevertheless instructive.

I. Tumors of the stomach are formed either by the organ itself in a condition of abnormal dilatation or contraction or by nodular and massive outgrowths of its walls. A detailed report of ten cases of dilatation of the stomach is given. In all of these cases the tumor could be seen, waves of peristalsis could be detected, and a pyloric tumor, more or less well defined, could be felt. The author makes a strong plea for a thorough and systematic examination in every case, and holds that unless all the methods of physical examination are exhausted justice has not been done the patient. Inspection gives the most important information, and the ten cases were diagnosed on sight. A dilated stomach may occupy every region of the abdomen except the upper part of the epigastrium. The most prominent distention is usually in the left half of the umbilical region. The greater curvature is sometimes as low down as three centimetres above the pubes. The lesser curvature is usually more distinct, and sometimes is seen below the navel. Inspection further reveals the presence of peristalsis, due to the hypertrophy of the muscular coat and the increase in the activity and frequency of the movements. The peristaltic waves usually pass from left to right; less frequently there is antiperistalsis. The exposure of the abdomen will usually cause these motions, while at times it is necessary to excite them by a stimulus. In many cases a slow, irregular protrusion is noticed here and there, more frequently towards the greater curvature, raising the abdomen into a boss or prominence. These movements usually occur with peristalsis, and throw out the contour of the organ in bold relief; but they may occur in enormously distended stomachs without peristaltic waves. Palpation reveals the existence of the splashing sound, clapotage, which is always present; the lowest level of the organ; the gurgling of gas through the pylorus, a valuable sign in case of doubtful tumors; and the presence or absence of a pyloric tumor. The varying degree of dilatation of the stomach would make a pyloric tumor vary in size from day to day. Percussion combined with palpation will bring out the clapotage most clearly. It also brings out the extent of stomach-tympany, which varies with the amount of fluid contents. Inflation should be practiced, except where there is a suspicion of gastric ulcer. Auscultation gives little information of value, the succession splash is heard by sudden depression of the diaphragm. The experiments of Von Mering show that the stomach is never empty, and after the tube has been used fluid will reaccumulate without more being taken in. This explains the dryness of the skin, scanty urine, and wasting noticed in connection with dilated stomach. There is no condition that can be confounded with dilatation of the stomach if the examination is thoroughly and systematically made. A dilated stomach causing a prominent abdominal tumor is almost invariably due to stenosis of the pylorus Rarely the tumor is caused by atony of the stomach, and occasionally by change of position in the organ. Only in very exceptional cases are the latter two associated with peristaltic waves.

II. The stomach itself in a state of contraction may form a definite palpable tumor in occlusion of the œsophagus and when there is a diffuse thickening of the stomach walls with contraction of the lumen. The notes on a case of the latter character are given in which the tumor felt like a ridge in the left hypochondrium, extending across the middle line as far as the right parasternal line. This case was due to a diffuse, infiltrating carcinoma of the stomach wall, and is only to be told from cirrhosis of the organ by microscopical examination.

III. The pylorus, though normally covered by the anterior margin of the liver, may be felt in thin-walled persons, particularly those suffering with atony of the stomach. It presents itself as a narrow, tubular structure with alternate relaxation and contraction and the bubbling of gas through it. The only fixed portion of the stomach is the cardiac orifice. Only about one-third of the stomach is in contact with the abdominal wall. The histories of thirteen cases of nodular and massive tumors of the stomach are given. These cases are classed as tumors of the pyloric region, tumors of the body of the stomach, and massive tumors occupying a very large area of the organ. A tumor-like formation at the pylorus may be due to cicatrical contraction and thickening about an old ulcer, hypertrophy of the pylorus, and cancerous growths. The pylorus may be invaded by growths from contiguous organs, and dislocation of the pylorus and adhesion to neighboring organs may cause stenosis. These tumors are usually associated with dilatation of the stomach. The history of dyspepsia and vomiting of blood will often point to the true cause in cases of contraction about an ulcer. Tubular and small nodular tumors present difficulty in the accurate diagnosis of the nature of the growth, since the symptoms are more those of chronic dyspepsia and not of extreme dilatation. Three cases are reported in which the tumor was due to thickening of the pylorus from chronic gastritis, and one in which it was due to a slowly growing scirrhus. Extensive nodular growths at the pylorus constitute a large majority of the cases of pyloric tumor and are usually cancerous. The tumors of the foregoing classes are always larger than would be expected from examination through the abdominal wall. Examination in the knee-elbow position often gives valuable information as to the position and relation of the tumor. A tumor on the anterior wall may be due to extension from the pylorus or to a growth involving only the stomach wall. These cases frequently die from perforation and peritonitis. The perforation may take place externally, into the colon or into the pericardium. The most difficult cases to recognize are those in which the walls of the stomach are extensively infiltrated. Tumors of this kind are to be differentiated from growths of the kidneys and spleen. Though only a small section of the stomach is available for palpation, a very large proportion of all tumors of the organ may be felt, owing to their greater frequency at the pylorus and to the frequent depression of the organ. Pyloric growths are often excessively mobile, one case being reported in which the tumor could be pushed down into the right and left iliac fossæ. Large nodular and massive growths are invariably cancerous.

Tumors of the Liver.—Owing to the fact that the liver extends entirely across the upper portion of the abdominal cavity, tumors of the organ may project to either side of the median line in front, more rarely into the left pleura behind. In women the organ is frequently so dislocated that a large part of the convexity is in contact with the anterior abdominal wall. The usual tumors of the liver are the liver itself, abscess, gumma, and cancer. Hydatids and tubercular tumors are found. A tumor composed of the liver itself, and which may pulsate, sometimes occurs with advanced mitral disease with tricuspid insufficiency, allowing the blood in the hepatic veins to receive pulsation. The case reported showed also a cake-like deformity, due to perihepatitis, and a large amount of ascites, due to contraction of the liver and to chronic peritonitis. Four cases of abscess of the liver are reported, each with a definite, palpable tumor. Only one of the cases presented the amœba coli. In the diagnosis of abscess of the liver the antecedent conditions have to be taken into account. The most common condition is dysentery. The toxic features (irregular fever, chills, and sweats) and the local symptoms, which are an increase in the size of the liver and tenderness on pressure, must also be taken into account. When abscess is suspected a long aspirator needle should be used. Four cases of syphilis of the liver are reported, two presenting definite tumors. Gummata, when rapidly growing or after cicatricial contraction, form the so-called "botryoid" liver. Cancer of the liver, with the exception of fibromyoma of the uterus, forms the largest tumor met with in the abdomen. The diagnosis of the secondary growths is easy. Primary cancer, especially when associated with cirrhosis, is difficult of recognition. The larger proportion of cases are secondary, and are characterized by rapid growth, profound cachexia, and often jaundice. The new growth may be diffusely scattered throughout the organ, producing uniform enlargement; but more commonly there are large, umbilicated outgrowths. In a case of sarcoma of the liver the masses were soft and fluctuating, resembling abscess. The primary lesion of cancer of the liver is to be looked for in the stomach, intestines, urogenital tract, or breast.

Tumors of the Gall-Bladder.—The gall-bladder may be dilated or its walls infiltrated with a new growth. In a large proportion of these cases gall-stones are present. A dilated gall-bladder may form a small, firm, rounded projection beneath the edge of the liver; a pyriform tumor, varying in size and freely movable; a very large tumor reaching to the pelvis; or a huge cyst occupying the entire abdominal cavity. The usual causes of dilatation are blocking of the cystic duct with calculi or compression of it by a new growth. Permanent blocking of the common duct does not necessarily lead to marked distention of the gall-bladder. The contents of the dilated organ may be a clear mucoid fluid when the obstruction is in the cystic duct, bile when the obstruction is in the common duct, pus or a puriform, bile-stained fluid when suppuration has occurred, or an albuminous or bloody fluid in cancer. A gall-bladder tumor is distinguished from growths in the colon and at the pylorus by the differences in the symptoms and by systematic local examinations, including inflation, if necessary, of the stomach and intestines. From movable kidney, which emerges beneath the liver margin, gall-bladder tumor is told by the disappearance of the tumor with the patient recumbent and reappearance on change of position; a movable kidney can be held down and prevented from returning during an expiration, and above a movable kidney the edge of the liver may be felt with great distinctness. The tongue-shaped process of the anterior margin of the liver, described by Riedel as due to tight lacing, may be associated with distended gall-bladder and give some trouble in diagnosis. [Attention was called to a case of this character by the writer many years ago, and reported in full in the Philadelphia Pathological Society Reports.—J. H. M.] An ill-defined nodular tumor at the liver edge may be a dilated gall-bladder filled with gall-stones. Cancer of the gall-bladder is most common in women. In seven-eighths of reported cases there has been a history of colic and jaundice. Rapid emaciation, with or without jaundice, and the development of cachexia would point to cancer. Chills and fever are against neoplasm. Jaundice is not present so long as the growth is confined to the gall-bladder; but when it extends to the ducts the jaundice is intense. Ascites may be caused by extension of the disease to the peritoneum, by pressure on or embolus of the portal vein. Aspiration of the tumor gives important evidence; a clear mucous fluid or pure bile favors gall-stones; a turbid, albuminous, or blood-stained fluid indicates neoplasm. An empyema of the gall-bladder may exist without chill and fever, indicating that the suppurative process has not involved the general bile-passages.

Tumors of the Intestines and other Organs.—Cancer of the intestines occurs most frequently (apart from the rectum) in the cæcum, sigmoid, splenic, and hepatic flexures of the colon. Cancer of the intestines arises in younger subjects than cancer of the stomach. It may be latent, giving rise to no symptoms until there is a development of secondary tumors. Griping, colicky pains are common, associated, when there is a narrowing of the lumen of the bowel, with distention of the abdomen, active peristalsis, and constipation. Diarrhœa, the passage of slime with the fæces, and hemorrhage are frequent symptoms. Cachexia develops progressively but not rapidly, and loss of weight may be slight. Tumors of the sigmoid are most movable, tumors of the cæcum most fixed. The tumor may vary in size, due to the presence of fæces near it. It hardens during contraction, and bubbling of gas through the tumor may be heard. A rolled, thickened omentum may form a definite tumor in the upper portion of the abdomen. A tumor of the pancreas is not always to be felt; it usually causes jaundice from pressure on the common bile-duct. Stearrhœa, glycosuria, and salivation may be present. Cases of cyst of the mysentery, phantom tumor, uterine fibroids, sarcoma of the abdominal wall, tumors of doubtful nature following dysentery, and aneurism of the aorta present interesting points in differential diagnosis.

Movable kidney is a common trouble, particularly in women who have borne children and in neurasthenics of either sex. The condition has been mistaken for a very movable tumor of the pylorus, for dilated gall-bladder, and, in exceptional instances, for the right lobe of the liver. Some cases present no symptoms, others present paroxysms of pain, "Dietl's crises," probably due to a twist of the ureter with retention of urine in the pelvis and calyces. These crises are so severe as to simulate peritonitis. A tumor developing with colicky pain in the renal region, and disappearing in a few days, with an increased flow of urine, is probably an intermittent hydronephrosis. A large proportion of these cases are in women who have borne children, and are associated with enteroptosis and neurasthenic symtoms. Cases of intemittent hydronephrosis are divided into those with obscure cause, those due to lesions of the bladder or lower extremity of the ureter, and those due to lesions of the upper extremity of the ureter. The causes of this condition are calculus, blood-clots, tuberculous lesions, spasm of the ureter, tumor of the bladder near the orifice of the ureter, and cancer of the uterus and vagina. The condition may be transient. Danger lies in the liability to permanent hydronephrosis and infection with pyogenic organisms. If the attacks are severe, nephrorrhaphy should be urged. Malignant disease of the kidneys frequently occurs in children, and is the most common cause of abdominal tumor in childhood, sarcoma of the retroperitoneal glands being next in frequency. In the tumor of the flank a systematic and repeated examination of the urine should be made. The aspirator needle and catheterization of the ureters give important evidence. A large tumor of the kidney may be due to tuberculosis of the organ. In a case of this kind the tubercule-bacillus will be found in the pus, and catheterization of the ureters will again give important evidence. Tuberculosis of the kidney is to be distinguished from cystitis.

In the series of cases exploratory incision was frequently practiced, confirming the diagnosis and prognosis. In no case were the chances of the patient damaged by the operation.—Int. Med. Magazine.

LEUCORRHOEA; ITS CAUSES, VARIETIES AND TREATMENT.

The subject of leucorrhœa is one deserving of fuller consideration than is generally accorded to it. In a large proportion of instances the symptom that first directs attention to the ordinary forms of gynæcological disease is some abnormal mucoid exudation from the genital canal. Such symptomatic discharges are frequently so prominent a feature of those cases, or are so obscure in their causation, so intractable in their treatment, or so far-reaching in their consequences, as to occasion many of the diagnostic therapeutic difficulties encountered in this special branch of practice. It may, therefore, not be useless to review, from the standpoint of a somewhat long clinical experience our knowledge of the general pathology of leucorrhœal complaints, their various forms, their common course, possible results, and the methods available for their treatment. In this connection no special reference need be made to those mere hypersecretions from the genital muscosa that, irrespectively of any pathological condition, may be physiologically occasioned by the local hyperæmia normally consequent on ovulation or pregnancy, or by the menopause. The term leucorrhœa should therefore be restricted to such non-hæmorrhagic or mucoid discharges from any portion of the genital lining membrane as contain morphological or other elements foreign to healthy mucus, and that are of pathological significance.

Vulvar Leucorrhœa.—This, according to the writer's observation in the Children's Hospital, Dublin, with which he had been connected for twenty-three years, is most frequently brought under notice in pediatric practice, and more usually is of constitutional or strumous origin, although it also not infrequently arises from topical causes, whether catarrhal or simple inflammatory, traumatic or specifically infective, such as gonorrhœa. From whichever of these causes vulvar leucorrhœal discharges may arise, it too often happens that they are ignored, or not submitted to proper treatment in their early stages. The frequent result of this is the ultimate extension of the complaint to the uterus or its appendages, and hence in after years in numberless instances cases of dysmenorrhœa, sterility, endo-uterine, and tubal disease are brought under gynæcological treatment that might have been obviated by due attention to the leucorrhœal troubles of early life.

Vaginal leucorrhœa may be ascribable either to any of the local exciting causes of genital hyperæmia, or to any abnormal constitutional condition by which the tonicity of the vaginal vessels is so impaired as to give rise to non-hæmorrhagic exudation therefrom. The most common of the former causes are catarrhal and simple inflammatory vaginitis; and next in frequency is gonorrhœal infection. The distinction between these is generally a matter of difficulty, or is often an impossibility in actual practice, and in many instances we must rely more on the history, symptoms, and probabilities of the case than on any differentiation from the readily ascertainable presence or absence of gonococci in the discharge. Whether specifically infective or not, however, the treatment of these cases is practically identical. In either instance our primary object should be to secure, as far as possible, the asepsis of the affected parts by the free use of warm antiseptic injections, such as lysol or boric acid (1 in 25), or corrosive sublimate (1 in 2000), so as to sterilize and cleanse the vaginal surface from the discharge which, even if not specifically infective, if allowed to accumulate or decompose, must act as a direct source of irritation, as well as a possible nidus for pathogenic micro-organisms by which the entire genital tract may be infected. In the second place, the same indications may be carried out most effectually immediately after each douching by vaginal insufflations of loretin, salol, or boric acid powder, or so-called "dry treatment." And thirdly, the parts in the intervals between these applications should be well separated by strips of antiseptic gauze saturated with dilute liquor plumbi, or with hazeline, the patient in the meanwhile being restricted to bed, and placed on such constitutional treatment as may be indicated in each case.

Vaginal as well as uterine leucorrhœa may, moreover, also occur, irrespectively of any recognizable local cause of irritation or hyperæmia, as the result of anæmia, chlorosis, strumous diathesis, and other general constitutional conditions, or as a direct consequence of arrested menstruation, lactation, or as a distant metastasis of gouty and rheumatic disorders, etc. In this connection the vaginal leucorrhœa of pregnancy may also be mentioned, as, although commonly it should be regarded as a physiological consequence or symptom rather than a disease of pregnancy, in some instances it assumes a more serious form, and in the latter months often give rise to most distressing pruritis of the pudendum. For the relief of this the writer would again suggest the local application of the methylene blue lotion, which he has recently recommended as one of the best of all topical analgesics in pruritic affections generally.

Cervical leucorrhœa is very frequently of special importance in connection with the causation of obstructive dysmenorrhœa and sterility, in which cases the cervical canal may be so sealed by an abnormally viscid and hyper-alkaline exudation from the Nabothian follicles and cervical endometrium as to interpose mechanical obstacles to either menstruation or conception. In our local treatment of such cases, therefore, our chief reliance should be placed on the free use of the cervical curette, before which the writer recommends the thorough dilatation of the canal by means of his rapid dilator, and then, immediately after curetting, applies iodized phenol or salol bougies to the affected surfaces. Lastly, in this, as in all other forms of chronic leucorrhœa, it is most essential that whatever topical measures are found necessary should be conjoined with these general remedies, which may be specially indicated by the constitutional state of the patient, by which such discharges are often occasioned, or to which, still more frequently, their continuance is due. In many instances of this kind a mild course of bichloride of mercury given in tincture of bark is especially serviceable. In the greater number of cases, however, chronic leucorrhœa is essentially a disease of debility, and, for its curative treatment, requires the exhibition of feruginous tonics, as well as rest, general and local, together with suitable hygienic and dietetic measures. For a complaint so many-sided in its etiology as this, it is needless to observe that there can be no special remedy. Nevertheless, in a large proportion of instances, the writer has derived more distinctly beneficial results from the long-continued employment, in small doses, of arsenical preparations or combinations such as Donovan's solution, than any other class of medicine employed in the constitutional treatment of chronic lecurrhœal cases generally.—T. M. Madded, in the Medical Times and Hospital Gazette.

According to statistical reports there were in 1893 in America fully 2,000 women practicing medicine in one or other of its forms, and inclusive of 130 homœopathists. The majority were ordinary practitioners, but among the remainder were 70 hospital physicians or surgeons; 95, professors in the schools; 610, specialists for the diseases of women; 70, alienists; 65, orthopedists; 40, oculists and aurists; and finally, 30 electro-therapeutists. In Canada there is but one medical school exclusively devoted to the training of medical ladies, but in the United States in 1893 there were ten, one of them being a homœopathic establishment.

Mr. James Payn pays a neat tribute to the doctor, in a recent issue of the Cornhill Magazine. "Upon the whole, and for a 'scratch' companion, I prefer a doctor to a man of any other calling. He may not be very good as a conversationalist, but he is rarely very bad—like a cheroot. He has had a genuine experience of life, and has seen down to the depths of it; a sick man does not attempt to deceive his doctor, or put the best face on his character, as he does with a priest. Moreover, what is very unusual, your doctor knows more about you professionally at all events, than you know about yourself. He does not tell you about it, it is true; not a word of that aneurism you carry about with you, and which will some day kill you in half a minute, but your consciousness that he may possess such knowledge makes him interesting. The best suggestions I have had made to me for plots for my novels have come to me from doctors, to whom I have also had cause to be grateful for many things."

THERAPEUTICS.

Treatment of Painful Dyspepsia.

It has been well stated by a well-known medical writer that the words dyspepsia and indigestion are terms which, while popular in the past, are not sufficiently definite to justify their continuous use to-day by the medical profession. On the other hand, there are few physicians who do not find that these terms are useful for the expression of certain conditions of the digestive function which they find it difficult to understand and almost equally difficult to relieve. In many instances it is practically impossible to do more than ameliorate the symptoms by regulation of the patient's diet and the administration of remedies which will aid digestion directly or indirectly, or by their action remove the unfavorable sensations produced by the disorder.

One of the most common of these conditions is the sensation of distention, most frequently associated with pain in the præcordium or thereabout, or, in other words, in the neighborhood of the cardiac end of the stomach. When it occurs in neurotic persons, this form of dyspepsia has received the name of "nervous indigestion," and the severity of the pain forces the patient to visit the physician, under the impression that he is suffering from some cardiac affection. Of the many remedies which may be used under these circumstances, we believe that a formula such as follows will prove valuable in a large proportion of them:

Chloral, ʒ ss vel ʒ i;
Sodii hyposulphitis, ʒ i vel ʒ ii;
Aquae menthae piperitae, q s. ad f ℥ iii. M.
Sig.—A teaspoonful after meals.

If this prescription is employed, the chloral acts as an antiseptic and nervous sedative, as does also the hyposulphite of sodium, and the peppermint water, if freshly prepared, possesses all the antiseptic properties common to the volatile oils, in addition to its slight local anæsthetic and stimulant properties.

Whatever may be the explanation of the virtue of this formula, it certainly is effective.—Therap. Gazette.

The Value of Salophen in Neuralgia.

"One of the most useful therapeutic acquisitions of the last twenty years," writes Dr. Lavrand (Journal des Sciences Medicales de Lille), "is certainly the salicylate of soda. Previously the physician was almost without resources in the treatment of acute and subacute rheumatism. In spite of the considerable advantages of this remedy, however, its use was sometimes attended with serious drawbacks, such as tinnitus, giddiness, delirium, etc. In the absence of a substitute for the salicylate the physician is often compelled to prescribe it, despite these disagreeable effects. At the present day we are more fortunate, for salophen seems to possess all the advantages of the salicylate without its drawbacks. After numerous trials, this remedy has been accepted as embodying both the properties of phenic and salicylic acid, the former component being in the form of acetyl-paramidophenol. Salol, which is a combination of phenol with salicylic acid and was brought forward as a substitute for salicylate of soda, has not fulfilled expectations, as it has given rise to numerous cases of toxic effects. On the other hand, the unanimous testimony of those who have employed salophen is that this remedy is as powerful an analgesic and antirheumatic as salicylate of soda, while practically devoid of unpleasant or injurious after-effects. Salophen passes unchanged through the stomach and is decomposed in the intestinal canal, and this explains why it is so well tolerated by the digestive organs." Impressed by these considerations Dr. Lavrand has given this remedy an extensive trial in cases of acute and subacute articular rheumatism and in neuralgias in rheumatic subjects. In many of these cases the salicylate of soda has been previously administered, but had provoked so much gastric disturbance and repugnance that its use had to be relinquished at the request of the patient. Salophen was then resorted to in 0.5 gramme doses two to four times daily, and proved to be fully as effective as the salicylate, while the tastelessness and freedom from gastric disturbance and nervous disorders rendered it adaptive for prolonged administration. The analgesic effect of the drug was sometimes remarkable, the pains being relieved with great rapidity by two or three doses.

DIPHTHERIA ANTITOXIN.

The following statement has been furnished by Dr. Paul Gibier:

The Serum.—It is transparent, yellow or reddish in color, and is undiluted. It is supplied in bottles containing 25 c.c. each, a quantity sufficient for an ordinary case of diphtheria at its incipient stage, and in bottles containing 7 c.c., which is sufficient to protect one or two adults or children exposed to infection. The immunizing power of the serum exceeds the proportion of 1 to 50,000, the standard thus far achieved by Roux and others; this signifies that 1 ccm. of antitoxin serum will immunize a body weighing up to 50 kilos, or 110 pounds.

Owing to the precautions observed in preparing the serum, it can be preserved for several weeks in a cool and dark place, as in the ice chest.

The Dose.—In ordinary cases a dose of 15 c.c. is injected when the disease is suspected and before the diagnosis is absolute, and after a period of twelve hours the remaining 10 c.c. are injected. Adults require larger doses. In serious cases the quantity should be larger; 25 c.c. at first, 25 c.c. more within twenty-four hours, and even 100 c.c. can be injected within a few days. The injections are given subcutaneously, preferably in the lateral part of the abdomen, after the site of injection has been carefully washed with a 4 per cent. solution of carbolic acid. The injections are almost painless, and massage is unnecessary, as the swelling caused by the fluid disappears quickly. In a family in which a case of diphtheria occurs, it is recommended to immunify the other members, especially the children, with a small quantity of serum (3 to 7 c.c.).

The Syringe.—The instrument made according to our directions has a capacity of 25 c.c. It can be thoroughly disinfected by washing it and the needle carefully, two or three times with sterilized water, and immediately after, with a 4 per cent. solution of carbolic acid, before the injection.

The Patient.—Although the serum is the essential agent in the treatment of diphtheria, the throat and the nares should be frequently irrigated with a sterilized solution of boracic acid. General reaction frequently appears within twenty-four hours, sometimes accompanied by erythema. The temperature rises one or two degrees and the pulse in children may attain 120 and 130. These phenomena are more apparent in patients who have been treated preventively with the antitoxin. The reaction rarely lasts more than twenty-four hours. A period of twenty-four hours generally elapses before a favorable result follows the injection, but in mild cases the improvement may appear within twelve hours, and in serious cases it may be delayed for thirty-six hours.—Internat. Board of Health Magazine.

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Meddlesome Midwifery.

A single striking expression sometimes becomes an agent of great power—for good or for evil. The words which head this article form such an expression. We fully agree with a speaker quoted in the editorial pages of the last issue of the Journal that they are potent for harm as well as for good, and that they have in fact done great harm. We believe, however, that they have in certain directions resulted in good.

In no department of practice are there greater differences in cases than in obstetrics. In many rural communities where life is quiet and all the surroundings are conducive to the development of healthy mothers, child-bearing is to a large degree a physiological process. It is strictly so, however, in but few modern communities. In the larger centers of population where sources of infection are innumerable; where deformities are common, resulting from rachitis and stunted development; where ignorance and vice prevail; where the conditions are decidedly not favorable to the development of healthy mothers, child-bearing is decidedly a pathological success. As such it requires the attention of the medical man as much as do the infectious diseases. The city practitioner, especially he who works in hospitals, sees daily conditions and complications which never come into the experience of his country brother. The latter would certainly be guilty of gross meddlesome midwifery were he to do many things which the former is constantly obliged to do. The conditions are so different that the one cannot from his own experience alone properly judge or criticise the other, yet such criticisms are constantly made. The one is charged with carelessness; the other with meddlesomeness.

It is meddlesome midwifery to use instruments to save the time of the doctor by hastening labor that is progressing normally and that will be finished properly in normal time. The doctor who has not time or patience to wait should not undertake such cases. In many other ways meddlesome midwifery may be practiced by the improper use of instruments. It is not a valid argument against an instrument, however, that it may be abused. If it is powerful for good, the remedy is not in abolishing it but in training physicians to use it. The medical attendant who allows a mother to die from exhaustion, or to run the risk of sepsis from sloughing tissues, due to prolonged pressure or to develop a vesico-vaginal fistula from the same cause, commits a far greater sin than that of meddlesome midwifery. These conditions are far less common now than they were formerly. Birth palseys in infants are more frequently caused by long compression of the head in late stages than by the forceps.

In one frequent and very dangerous condition the utmost activity on the part of the attending physician is at the farthest possible remove from meddling. That condition is septic infection. Except in very rare cases, the death of a mother from puerperal fever is the fault of somebody. It may be of the nurse, of the doctor, or more rarely of the patient. In no condition has greater improvement been made than in the treatment of puerperal fever. Surgery with all its boasted advances can point to nothing more brilliant than the present methods of preventing and treating this disorder. Twenty years ago the conclusion had almost been reached that large maternity hospitals must be abandoned, so great was the mortality. Now cases of every description and from every class of society are treated by the thousand in such hospitals without the loss of a mother from sepsis. In private practice, the results should be equally good. When the condition does appear it should be treated with the utmost promptness and vigor.

There is no reason why obsetrics alone should be singled out in medicine for sweeping denunciation of the adoption of active measures by the medical men. When a case progresses normally and satisfactorily, let hands be kept off. When it progresses abnormally or complications arise, let us, as in every other department of practice, treat the case according to the conditions present, conservatively if possible, but vigorously if the conditions require it.

Suicide.

The tendency "to rather bear the ills we have than to fly to those we know not of" is so strong in human nature that suicide is a comparatively rare form of death. It has, however, a peculiar fascination, even when insanity can be proved. The causes which induced it must have been so momentous that a death by one's own hand has a peculiar interest. Dr. Herbert O. Collins in the Lancet-Clinic has recently reported a most interesting study of the causes that might have led to this act. He bases his study on over forty-five hundred cases, and has developed some very strange and interesting facts.

He found that during the months of April, May and June, there were 1,505 cases; during July, August, and September, 1,248; and during the three following months, but 748. A very large majority of cases occurred, therefore, during the warm months. The explanation of this is not clear. The natural supposition would have been that fall and winter with its cold weather and storms would have presented the greater number of cases.

Of the various influences brought to bear as the cause for committing this act, insanity is by far the most common, causing in these cases 1,476. Physical ill health caused 935 cases; temporary insanity, 717; domestic trouble, 525; business perplexities, 395; emotions—as love jealousy, and remorse, 20; poverty and want, 4; religious excitement, 3; unknown causes, 336. It is not impossible that acute insanity, ill health, and temporary intemperance were prominent causes, added to poverty and business perplexity, and that these latter causes were more potent than these figures would seem to show. It is believed by some that all cases of suicide must be due to insanity, but this is not tenable.

Among the various forms of insanity in which there may be a suicidal tendency in addition to the common form of melancholia the author refers to general paralysis, alcoholic insanity, the suicidal form of impulsive insanity, and puerperal insanity. There is a great difference in the attempts at suicide in the different forms of insanity. The suicidal melancholic calmly weighs the subject, being perhaps days or weeks in coming to the conclusion that life is not worth living. After deliberately reaching this conclusion the same process is employed in making his plans for carrying out his purpose. This determination may be very tenaciously held. Although he may be many times foiled he does not relinquish his determination, but sooner or later he succeeds. The victim of one of the more impulsive forms of insanity, however, is seized with a sudden impulse to kill himself, which may leave as suddenly as it came or may never return if once prevented. In puerperal insanity the suicidal tendency is sometimes very intense and develops without warning. Such patients should never be left unwatched.

A table showing the manner of the suicidal act is extremely interesting. Hanging and strangulation were the methods selected in 1601 cases; drowning, 1193; firearms, 525; suffocation, 222; poisoning, 221; wounds by cutting instruments, 130; throat cutting (not included in previous item), 64; jumping from a height, 30; opiates, 16; bleeding, 8; burning, 1. Death from opiates, one of the easiest and least painful forms, it will be observed is rare. This is probably due to lack of opportunity. Probably the ease with which the means may be obtained has more to do with the choice than anything else.

Of over four thousand cases, 2630 lived in the country; 1461 in towns and cities. 3403 were men; 931 were women. 155 were below twenty, and 1246 were over sixty, the greatest number of cases occurring between the ages of forty and sixty.

No statistics are given by the author upon the very interesting subject of suicide occurring epidemically. Such cases frequently occur in groups. One suicide is apt to be followed by others in the near vicinity. We suspect that this may be one explanation for the large number of cases reported from the country. In quiet communities such a deed makes a far more vivid impression than in cities where it is more quickly forgotten amid the greater bustle and excitement. It is our impression that cases of suicide occur more frequently in groups in the country than in the city.

An Impoverished Condition of the Blood as a Cause of the Neuroses of Childhood.

Dr. B. K. Rachford in a recent number of the Archives of Pediatrics, reports investigations made to determine what nervous symptoms may be produced in children by an impoverished condition of the blood. He distinguishes between innutrition of the nerve elements and malnutrition. By the former is meant the simple starvation of nerve elements. By malnutrition is meant a bad nutrition resulting from a diminished amount of albumin, calcium, or some other important constituent. After numerous observations and physiological experiments upon animals he is led to believe that simple innutrition of nerve centers leads to such a diminution of stored up energy that any increased irritability which may result from such innutrition is of but little moment in the production of such neuroses. The fact at least remains that experimental innutrition of nerve centers does not increase the reflex phenomena presided over by these centers. He concludes that innutrition of nerve elements is not an important factor of neurotic disease in children.

Malnutrition of nerve elements on the other hand results in making nerve cells much more irritable, so that they discharge their force more readily than stable nerve cells would do. Chronic anæmia in infancy is due to many causes, the most important of which are tuberculosis, rheumatism, malaria, syphilis, and intestinal disease. The blood in these conditions is weak in proteids, and hemoglobin. This results in oxygen and proteid starvation of nerve tissue, undoubtedly an important factor in producing nervous symptoms. Fat starvation is an important form of malnutrition and can be best studied in rickets. Calcium starvation is also a factor of importance, but the exact part it plays has not yet been fully determined. The author believes that it is a factor of considerable importance in the production of the convulsive neuroses of children.

We regret to learn that Deputy Surgeon-General John L. Billings of the army has requested that he be placed on the retired list, and that after October the Army Medical Museum, of which he is a curator, and the library of the surgeon-general's office, of which he is librarian, will know him no longer. These noble institutions are what they are largely because of his zeal and industry, and it will require a rare man to fill his place. Before his retirement Dr. Billings hopes to complete the final volume of the Index Catalogue of the surgeon-general's library, a work which has made the medical profession of the world his debtor.

Without entering into any discussion of statistics of cures obtained by the "Pasteur Institute"—cures that can always be contested, since it cannot be proved with certainty that the subject bitten would in any case have had hydrophobia—it is only too certain that the anti-rabic inoculations have induced death in many subjects, with special symptoms that have caused such deaths to be designated by the names of paralytic rage or hydrophobia of the laboratory. Without taking part either for or against the antirabic theories of Pasteur, one cannot deny that this unfortunate want of success demonstrates that such injections are not absolutely inoffensive. While we may appreciate the results obtained, no one can affirm that they may not produce others farther remote; we know, too, that the origin of these may also be contested.—Journal de Medecine de Paris.

BOOK REVIEWS.

"The Care of the Baby," A Manual for Mothers and Nurses, Containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. Crozier Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Professor of Clinical Medicine in Philadelphia Polyclinic and School of Graduates in Medicine; Physician to the Children's Hospital, to the Methodist Episcopal Hospital, and to St. Agnes' Hospital, Philadelphia; Member of the American Pediatric Society and of the Association of American Physicians. Philadelphia: W. B. Saunders. 1895 (Pp. 8-377.) Price $1.50.

This is a difficult class of medical writing to do successfully. While it deals with scientific subjects and must be made scientifically correct, it must be adapted to the use of the mother and persons who have no professional or scientific training. It is very difficult to write for the mother or the nurse upon medical topics in a manner that will not encroach upon the province of the physician. Yet it is eminently proper that such works should be written and that the mother should receive instruction upon the proper management of her infant. In fulfilling these various requirements, Dr. Griffith has been extremely successful. His book is the best work for the use of mothers and nurses which we have yet seen. The doctor can safely place it in their hands, feeling that they will obtain that knowledge which they should properly receive, without the fear that they will get the idea that they are capable of taking the full medical charge of the infant in their care.

The style is simple and clear and the knowledge imparted will be understood by the most untrained reader. The statistics are reliable and the subject matter is thoroughly trustworthy and fully in accord with present teachings. The first chapter is devoted to management during pregnancy, and is a thoroughly good one. It contains many things which the young mother should know without going into unnecessary details. The second and third chapters include many important facts regarding the baby, its growth and development. The chapter upon the baby's toilet contains a complete list of things which should be provided before the baby's coming, and details many matters of importance regarding the personal management and hygiene of the infant. The chapter on the baby's clothes is one of the best in the book. It contains a description of the various articles needed for the long clothes, the short clothes, and the clothes of early childhood. The author speaks strongly against tight clothing and bands, and advises the Gertrude or princess style of cutting the long clothes. Proper clothing is a matter of such vital importance to the comfort and well-being of the infant, that physicians should render themselves thoroughly conversant with modern and more rational methods, and should use their influence in having them adopted.

In the very important chapter upon infant feeding that subject is most satisfactorily discussed and the practitioner will find many points of value to himself as well as the mother. It presents the subject clearly, as it is to-day held by the best authorities. The formulæ given are simple and easily prepared, and the directions are clear and explicit. The author emphasizes important details without going too fully into minutiæ, with which many books of this character are burdened and rendered obscure. The diet lists will prove of great value both to mother and physician. The chapters on sleep, and the physical, mental, and moral training are also good. The same is true of the chapter on the baby's nurses.

Not only will the work prove of value to the mother, for whom it is especially written, but it will also be a great aid to general practitioners, very few of whom could not read it without profit. We believe, in fact, that it will on the whole prove of as much practical value as a work for the physician as for the nurse and mother. The doctor can certainly read it with profit and feel perfectly safe in recommending it to his patients.

"The Art of Massage:" Its Physiological Effects and Therapeutic Applications. By J. H. Kellogg, M.D., Member of the British Gynecological Society, Superintendent of the Battle Creek (Mich.) Sanitarium. Modern Medicine Publishing Co., Battle Creek, Mich. (Pp. xvi—241.)

Massage has grown to be regarded as a department of medicine of great importance. Only during recent years has scientific massage been known in this country. It was necessary to overcome much prejudice, as it was formerly used together with electricity and hydrotherapy very largely by quacks.

The author began the study of massage twenty years ago and studied thoroughly the subject in Sweden, Germany, and Switzerland. He is unquestionably a thorough master of the subject, as this book fully demonstrates. This volume is intended primarily for the use of medical students and student nurses and is especially adapted for use in training schools for nurses. One of the faults of works upon the subject which have heretofore appeared, has been the absence of specific directions for the various procedures recommended. The indications and contra-indications for its employment have also been neglected. In these regards, the present volume leaves little to be desired.

After a brief summary of the history of massage about thirty pages are devoted to anatomy and the physiological effects of massage. This part of the book is copiously illustrated with full-page plates taken from Bock. Then follows a chapter devoted to the therapeutic applications with illustrations of the motor points of the body. The various procedures of massage are then described very lucidly and thoroughly. The author has introduced a number of new procedures, which must prove of considerable value. Nearly seventy pages are then devoted to massage of special regions, and this is followed by chapters upon mechanical massage and physical culture. The rest cure is described in minute detail. A very valuable feature of the work is the numbering of the different paragraphs. This is designed both for immediate reference and also for the use of the practitioner who may wish to give special directions for the masseur. It is necessary for the physician to write in his prescription only the numbers of the paragraphs which describe the procedures which he wishes especially employed.

A very striking feature of the work are the excellent illustrations, one hundred and forty in number. They are half-tone reproductions from actual photographs and add decidedly to the value of the book. It would in fact be very difficult to write a work upon this subject without satisfactory illustrations. The illustrations are extremely well done and the typographical part of the work reflects the greatest credit upon the publisher. On the whole it is by all means the best work for the general practitioner upon this subject which we have yet seen.

"Skiascopy," and its Practical Application to the Study of Refraction. By Edward Jackson, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic, Surgeon to Wills' Eye Hospital, etc. With 26 Illustrations, Mostly Original. Philadelphia: The Edwards & Docker Co. 1895. (Price $1.00. Pp. 7—109.)

This little book was written to bring about the more general adoption of skiascopy as an essential part of the examination for ametropia. Though most opthalmologists are familiar with the test, its full practical value is not generally understood. The work is written under the assumption that the reader possesses a general knowledge of the eye and of optics. The claims of the subject for consideration are that skiascopy being an objective test and independent of the patient's intelligence can be applied more generally than any other without his co-operation. It is the most accurate of the different tests, the accuracy depending largely upon the skill and patience of the observer. It does not, however, require any rare natural qualifications to apply it for most eyes. It requires no costly or cumbersome apparatus. The work is clearly written in a concise and lucid style and fulfills well the design of the author.

"Transactions of the Southern Surgical and Gynecological Association Volume VII." Seventh Session, held at Charlestown, S. C., Nov. 13, 14, and 15, 1894. Published by the Association, 1895. (Pp. xliii—332.)

This is the handsomest volume of Transactions which comes to our table. The present issue is fully up to the standard, and is a sumptuous volume. Of far more importance, however, than binding and printing is the subject matter and in this the work of the Southern Surgical and Gynecological Association is never wanting. The present number contains about thirty papers almost without exception of a high order of literary and scientific merit. The subjects cover a wide field, being almost entirely of a practical and clinical nature. The yearly volumes of these transactions form important additions to the physician's library.

We have been informed, on good authority, of a practice pursued by one manufacturer in the making of tablets of the so-called narcotic tinctures (i.e., aconite, belladonna, digitalis, etc.), which, if true, is open to the severest censure. This manufacturer, finding that his tablets of these tinctures stuck together on keeping in stock, adopted a new procedure. Instead of making the tablets contain the tincture in minims, as represented, he makes a fluid extract of the drug, evaporates to a thick consistency, washes with petroleum benzin to remove resin, coloring matter, and benzin-soluble extractive, spreads on plates, dries with heat, and makes up into tablets. Now, apart from the question as to whether this benzin treatment removes or alters any active principles or not, the fact remains that such tablets are not what they are represented to be. Instead of being made of tinctures, as claimed, they are made of fluid extracts, concentrated by heat, washed with a solvent that removes certain proximate principles, and then heated to eliminate the persistently remaining traces of benzin, which heat probably modifies, if it does not destroy, the remaining proximate constituents.—Phila. College of Pharmacy Alumni Jour.

MEDICAL NEWS AND NOTES.

The Committee on Public Charitable Institutions have reported adversely to the bill proposing to compel the employment of the Keeley cure at the Massachusetts Hospital for Inebriates.

In several States a bill has been introduced requiring the manufacturers of patent medicines and nostrums to publish the formula on each bottle, box, or package. The measure is a just one.—Medical Age.

Who is most to be pitied? The small son of the anti-vivisectionist who is neither allowed to hunt nor fish; or the parents who show such unmistakable evidence of mental aberration?

A Canadian newspaper calls attention to a nursing bottle advertisement, which concludes with the words: "When the baby is done drinking it must be unscrewed and laid in a cool place under a tap. If the baby does not thrive on fresh milk, it should be boiled." Poor baby!

Since 1832, 148,000 persons have died in Great Britain from cholera, 457,000 in France, 351,000 in Germany, 507,000 in Spain and Portugal, 1,118,000 in Austria, and 1,775,000 in Russia.

The donations by the Vanderbilt and Sloan families to the cause of medicine, and the relief of the poor in connection with helping along the cause of medical education—as represented by the College of Physicians and Surgeons, New York—have amounted to $2,270,000. This sum has been given since 1884.

Among the curiosities of the coroner's office, is noticed the case of death of an eight months old baby by getting a marsh-mallow in her throat. She was promptly taken to the Woman's Homeopathic Hospital, but it was not found possible to prevent a fatal result.—Jour. Am. Med. Assoc.

As one result of the Chino-Japanese war a camphor famine is now threatened, according to a London dispatch of the 25th ult., which says the price of camphor has rapidly advanced, and Japan is placing the most severe restrictions upon its exportation. Much of the camphor in England is held by a syndicate. Should a warm summer bring cholera and dysentery the demand for camphor would be great, and its scarcity will not only interfere with many medical compounds, but will hinder the manufacture of smokeless gunpowder, in which camphor largely enters as an ingredient.

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ORIGINAL ARTICLES.

HOSPITAL MANAGEMENT.[1]

BY W. L. ESTES, A.M., M.D.,

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As the time limit for papers will not permit the discussion of every feature of hospital management, I beg to give a sort of outline or composite statement of the management of the majority of large general hospitals of the United States, as the result of a synthesis, of investigations made personally, or by letter, of most of the principal hospitals throughout the large cities of the country.[2]

From this summary I wish to select certain points of organization and features of management for discussion. In this consideration only general hospitals will be taken into account, and only such as do chiefly charitable work.

The hospitals of the United States may be divided into four general classes:

1. Hospitals connected with, and forming a part of universities or seats of learning.

2. Public hospitals so-called, i. e., those under the control of state, county, or municipal authority.

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[1] Read before the American Academy of Medicine, Baltimore, May 4, 1895.

[2] I beg to offer my grateful acknowledgements to the officials of many hospitals who have most kindly assisted by sending answers to a set of questions, and in most instances copies of rules and regulations of the hospitals.

3. Church hospitals, or those under the control of religious sects.

4. Endowed hospitals, which may be called, and frequently are, private hospitals. These are under the control of a Board of Trustees, the appointment of which is usually determined by the terms of the endowment, or by the will of the testator.

SUMMARY OF HOSPITAL MANAGEMENT.

The majority of the hospitals are under the direct oligarchical control of a Board of Managers or Trustees, composed of men who are not only not physicians, but who have had as a rule no previous training nor special knowledge or instruction in the management of institutions for the sick. It is the custom of hospitals to either deny medical representation in the boards of management, or else to restrict it to a very small minority.

The actual management and direction of affairs is carried on by a special committee elected from the general board, usually denominated the Executive Committee. And members of this committee are eligible for re-election for indefinite periods. This Board of Managers, except that of public hospitals and hospitals belonging to some religious sect, is not directly responsible to any one for the conduct of the institution, as long as it does not infringe any legal statute. There is no appeal from its decision in any matter relating to the hospital.

The Superintendent, Warden or Executive Officer is usually a layman, and, as representing the Board of Management, is the superior authority in the daily management of the institution. He has, technically, the authority to direct all the affairs of the wards except the actual giving of medicines, performing surgical operations and dressings, and prescribing the diet.

The Superintendent of nurses, supervising nurse, or head nurse, has the superior direction of the nursing, and may, if she choose, institute methods of her own in the manner of caring for patients, provided she does not actually prevent the prescribed dosing and dressing.

The medical staff is made up of a "consulting" and "visiting staff."

The consulting staff is usually an emeritus position and rarely forms any feature in the affairs of a hospital.

The visiting staff is composed of physicians appointed by the Board of Managers, sometimes having received the endorsement of other medical men, but not necessarily so. They serve as a rule for an indefinite term with rotations of three to six months for each. They agree to give their time and labor gratuitously to the institution. In a number of institutions they are allowed to send private patients to the hospital and these patients pay a fee for their services, provided the hospital be first reimbursed by the patient for board, lodging, etc. If, however, no arrangement be made previously to admission, no matter what the financial status of the patient may be, he (the physician) cannot receive any fee for any professional service rendered. The visiting physicians are required by the rules to make daily visits to the patients in the hospital, and as often besides as emergenies may require. If their mode of practice, investigations, or operations do not please the board of managers, they, or any one of them, may be summarily dismissed from the hospital service, without adequate explanation and with no redress. Members of the visiting staff are permitted as a rule to give clinical instruction in the hospital, using such patients "as do not object" as subjects for demonstrations.

The Medical Board is an organization made up, as a rule, of members from the consulting and visiting staffs. This board may discuss all matters pertaining to the "salubrity of the hospital and welfare of its inmates," and report to the Board of Managers, directly in some instances, in others through the Superintendent. A few institutions[1] have provisions for conferences between the medical board and board of managers, but except in one instance (Johns Hopkins, Baltimore), it is not a part of the regulation duties of the medical board to advise the board of managers with reference to hospital affairs. While, as a matter of courtesy, nearly all institutions request the opinion of the medical board in matters of innovation of a purely technical character, there is nothing in the rules requiring them to regard the judgment of the medical board, and any innovation may be undertaken without the consent of the medical board, and be carried through in spite of any protest from this board. The medical board and the visiting staff have no executive powers whatever.

The House Staff consists of recent graduates in medicine who, as a rule, reside in the hospital. They are appointed by the board of managers upon recommendation of the medical board; this recommendation is usually consequent upon an examination which is sometimes competitive. This staff usually has three grades; viz.: 1. House physician or surgeon; 2. Senior assistant; 3. Junior assistant. In some hospitals on the surgical division, there is also an externe, who occupies a fourth grade and is called dresser. The division of the house staff is according with the several divisions of the service in the hospital, i. e., 1. Internal medicine; 2. Surgery; 3 Gynceology, etc. In the medical division the term is usually six months in each grade, making a term of eighteen months altogether. If there be a dresser the term of service in the surgical division is usually two years. The other divisions have a term of six months or a year each, and require the incumbent to have had previous hospital experience.

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[1] West Penn. Hospital, Pittsburgh, Penn , Boston City, and Cook's County, Chicago, have provisions in their rules for Conference Committees.

These internes can only be dismissed by the board of managers, no matter of what offence or peccadillo they may be guilty. The visiting staff may suspend them, and prefer charges against them and recommend dismissal. On the other hand, any one of them, or all of them may be dismissed at once by the board of managers, notwithstanding the protest of the whole medical board.

The duties of these young gentlemen are to act as assistants to the visiting staff, and to carry on the treatment of the patients in the absence of the visiting staff. They are responsible to the visiting staff for their medical acts, and to the superintendent for their social behavior. They usually receive as remuneration, board and lodging, and sometimes a set of instruments, not to cost more than thirty dollars, when their term of service expires.

The proper conduct of a hospital requires a dual management; that is to say there is first, the management of the patients themselves, their treatment, and the scientific research and experiment which is necessary for the improvement of methods, and for the general well being of the sick and injured; secondly, the purely executive running of the business and lay affairs of the institution; that they are mutually interdependent there can be no question—one cannot exist without the other. While there are abundant facts to prove that one board of managers,—a purely medical board—or rather a board made up entirely of physicians, is entirely competent to run the whole establishment in every detail, the obverse is not true, for no hospital could be carried on in all its departments by a set of laymen. Modern custom has, however, gradually established the existence of two boards, the medical board and the board of managers, for performing the two functions.

In the summary of the ordinary organization of hospitals it is shown that there has been a transposition of places of these two boards. The absolutely necessary is placed after and made subservient to the not necessary. The medical board in every case is made responsible to and absolutely under the jurisdiction of the lay board (the board of managers). This reversal of the ancient order, and what would logically appear to be the proper constitutions of asylums for the sick and injured, is a most interesting sociologic problem. I would suggest that it is purely a result of commercialism creeping into the affairs of these institutions. Physicians did not wish to have their attention deviated or detained from the higher affairs, and finally relegated the purely executive management to laymen, and when institutions began to receive large endowments and to own and control large pecuniary interests, the gradually dominating power of the representatives of money gained the first consideration in the business world. Physicians were too much engrossed with their work to heed at first, and too dignified to contend against the trend when it could have been remedied only by acrimonious social fights. So the transposition was established. The question now is—is it right? Custom is the "vox populi" in social affairs. As a democratic people, I presume we ought to accept what the majority has established, as an expression—if not of absolute right—at least of expediency, and it should be in this spirit that we ought to allow this phase of hospital management to rest as it is.

RESPONSIBILITY OF THE BOARD OF MANAGERS.

A most important point to establish in the conduct of a hospital is that the board of managers ought to be made absolutely responsible to some supervising higher power. The physicians are made responsible to the managers, they in turn ought to be under the positive control of some body.

Hospitals organized by universities have a managerial board responsible to the general board of the university and through it to the state.

The state, county, and municipal hospitals require their boards to be responsible to the people through the several superior appointing powers. Unfortunately, however, such boards follow the complexion of the prevailing political party, and change not by civil service rules, and very seldom by merit, but by political favor; the result is that these boards may be made up of politicians, and the affairs of the institution conducted upon political lines, with all that usually implies. Unless something flagrant happens, what is everybody's concern is not any one's special duty. These hospitals are conducted by the boards of managers without question or control therefore and they may do anything with the appropriations, and establish most outrageous rules and methods of management, provided the visit of the official inspectors can be anticipated and accounts and reports arranged accordingly. Reports and accounts are easily manufactured and unless a thorough examination be made of all the affairs of the management it is impossible to check them. This thorough examination is rarely ever made.

Church hospitals have boards variously constituted. In some cases they are appointed by ecclesiastical authority. Usually, however, they are elected by the vote of a so-called "society," made up of large contributors to the hospital "life members" and certain ex-officio clergymen of the sect under whose denomination the institution is chartered. In this case the managers are in a restricted sense elected by ballots of the society, and are responsible to this society. In this form of organization the responsibility of the managers is much more direct and actual than in others.

The endowed hospitals have Boards of Trustees responsible to no supervision except the very superficial one of the reports required by the State Board of Charities, and an occasional visit from one of the visitors of this board; and in case appropriations from the state are received a quarterly report of the financial affairs is sent in. The actual conduct of the institution has no revision by any power higher than the board of trustees unless some legal statute be infringed. The boards of trustees are generally composed of the most solid business men of the community, whose integrity and probity are unquestioned. The financial affairs are, therefore, perfectly safe, provided these men give their personal attention to the management.

Executive Committee.—The real power in the actual management of all hospitals is the Executive Committee of the Board of Managers. This committee is appointed by the board itself. The members of course are responsible to the general board. A committee composed of shrewd men, as a rule, has no difficulty in managing as it pleases. The busy man of affairs has but little time to give to the committee work and to look closely into the actual doings of the commitee, unless some snarl occurs in the affairs. It soon follows that the actual conduct of the affairs of the institution falls into the hands of a few men of leisure, and one or two ardent spirits, whose enthusiasm and attention are not without some strong tincture of selfishness, in the form of some collateral reputation, or work to establish and support. In a short time, therefore, it happens that the control of the whole institution, including the personnel of the medical corps, as well as the expenditure of all the monies and the erection of all buildings, is practically under the autocratic management of one or two men. If these men are not guilty of any serious blunder, or rather, are not discovered in any serious fault, they may continue their régime indefinitely, or as long as they live, in the case of endowed hospitals. Any one familiar with the working of boards or committees knows that the actual work does fall, as a rule, upon a very few members, and that very little business would be done if there were no particularly active men in these boards and committees. The point is, however, whether in the discharge of solemn trusts, such as the management of charitable institutions ought to be considered, an organization should be permitted which would allow the counting of a quorum when none was present, and the passing of the resolutions affecting the vital interests of an institution as a sense of the whole executive committee when only two members were present.

How is this to be remedied? There is no use in physicians preaching to hospital boards. Ask any one of the fine business men on an executive committee or board of managers of an institution, if he would permit a mill, mine, or any large business enterprise in which he had a large pecuniary interest, to be managed in any such way ?

It would help matters somewhat if the rules of hospital management should be so amended that no member of an executive committee could serve two consecutive terms, and that the terms should never be but one year long, and that no member should be eligible to re-election on the Board of Managers who did not attend the meetings of the Executive Committee regularly when he was a member of the Committee. Besides, every hospital in a state ought to be fully under the control and censorship of the State Board of Charities (which board ought to be entirely separate and distinct from the Board of Corrections), and statutes passed requiring skilled accountants to go over, and report annually upon all the financial affairs of the institution, and a yearly endorsement of the general management of the hospital be required from the Board of Charities.

Superintendent.—The connecting link in the prevailing modern dual management of a hospital is the Superintendent. While he is the executive officer for the trustees or managers, his authority extends to the direction of all the affairs of the wards except the actual prescribing and operating. He must be ready to act quickly, decisively and intelligently in the various emergencies which occur so frequently in the daily affairs of a hospital. It would logically appear that a man who has had a thorough medical training could best perform these duties, provided he possessed the necessary executive ability. It seems a widespread opinion amongst laymen that a physician rarely has sufficient executive ability to manage any business enterprise properly. The immediate management of a hospital is not a business enterprise, strictly speaking. The histories of the war-time hospitals abundantly prove, however, that a physician can manage a hospital economically and most satisfactorily. Besides, my investigation of present hospitals shows that out of twenty-six[1] large hospitals, six of the very best have physicians as superintendents. I wish to urge the especial adaptability of a physician on account of his training for the superintendency and intimate management of a hospital.

In certain isolated hospitals, in Pennsylvania especially, an organization has been tried which makes a physician both superintendent and physician and surgeon-in-chief. This provides a most amicable arrangement as far as the internal affairs of the hospitals are concerned, and as far as I am able to learn, has been successful, certainly so in a managerial sense. If a hospital be a growing one, after a time the work of the two departments becomes too much for any one man. He will have either to neglect his study and so fall behind in the scientific part of his duties, or he will have to delegate to assistants the household affairs and the management of the internal business of the hospital, in which case this usually becomes unsatisfactory and irregular. He must make a choice between the two. If the man loves his profession he will soon devote himself to the scientific work and request relief from the other. As director of the whole establishment, with a qualified steward under him to discharge efficiently all the duties appertaining to the superintendency, one who would absolutely remove from him all care of the daily running of the hospital, and who would assume control of all accounts and records except medical records, a physician might also be the physician and surgeon-in-chief of the institution and have no difficulty in discharging most efficiently the duties appertaining to this higher function. An organization of this kind, with good active assistants, and a consulting staff for the smaller specialties, would be, in my judgment, an ideal form of management for general hospitals of moderate size.

MEDICAL STAFF.

'In the prevailing form of organization the medical staff of a hospital has no equal voice in the management of the affairs of the institution. The members of this staff are appointed by the board of trustees or managers, and they are entirely subject to and under the control of this board. The medical affairs of a hospital ought to be, at least, of as much importance as the business affairs. Common justice would suggest that the medical men who conduct these affairs ought to have functions equal in every respect, in point of dignity and control, to the layboard. In order to obtain this the separate and distinct functions of the two boards ought to be recognized and regarded. The appointment of the members of the medical staff ought to be by a process similar to that prevailing for the appointment of members of the layboard (by the officials or society which appoints the board of managers), and vacancies in the staff should be filled by the medical board itself or by the higher appointing power—not by the board of managers. The members of the medical staff ought in no case to be subject to dismissal by the board of managers, and ought in every instance, to have the right of demanding and obtaining an inquiry and a chance of defense before any dismissal. All innovations which concern the medical service ought to be undertaken only after the sanction of the medical staff. In short, the two boards ought to be separate and distinct and not one subject to the other, each to have a separate function; to the one should belong all pecuniary and business affairs, and to the other the scientific affairs, and when the concerns of both are implicated all action should be the result of a joint and equal vote after due consultation and deliberation of the two boards together.

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[1] Johns Hopkins; Mass. General, Boston City; Presbyterian, Philadelphia; Charity, New Orleans; Garfield, Washington, Episcopal, Philadelphia.

Service of the Visiting Staff.—The old and still prevailing custom of appointing several physicians to the same division of a hospital service, in the light of modern thought and some experience, appears bad for the patients, hurtful to the institution, and very unsatisfactory to the earnest hospital worker. Consecutive work cannot be thoroughly carried out, valuable experiments are apt to be interrupted, and frequent change of treatments and methods is confusing and demoralizing to the assistants and attendants. A few leading hospitals[1], have set the example and demonstrated beyond a doubt the excellence of continuous attendance of one responsible chief, who has full charge of a whole service and his own special assistants to help him. This arrangement requires more time to be given to the hospital by the visiting physician, but a hospital physician ought to be ready and willing in accepting such a position to give all necessary time to the work. No general practitioner in full family practice can continue to be an efficient hospital physician, and no man who cannot afford to lose the income of a family practice can serve acceptably as a hospital physician, because in the first instance he cannot give sufficient time to the work, and in the second instance he cannot lose sufficient money for the work.

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[1] Johns Hopkins, Roosevelt, Presbyterian, in New York

PURPOSE AND EFFECT OF HOSPITALS.

Besides the organization and the manner of actual work within a hospital, the purpose of hospitals in the larger sociologic sense, their effects upon the communities, and their outside influence, deserve much consideration. So little time is left that I must deal with these matters also in a sketchy manner, and rather indicate than amplify the points I wish to make.

The primary objects of hospitals ought, doubtless, to be charitable. True charity supports the helpless and assists the temporarily incapacitated man until he can help himself. If hospitals so multiply their capacities that the undeserving and frauds may find easy entrance into their wards and ready access to free treatment in their dispensaries, it soon follows that people who have no right or reason whatever to evade paying a physician's fees, and who could perfectly well be treated at their homes, flock to the hospitals, not only usurping the places to the detriment of many actually deserving and suffering poor, but to the great injury and hurt of young physicians who would otherwise acquire the practice and collect the fees.

In order to obtain some idea as to whether there are more hospitals or hospital accommodations than are necessary, I have taken Pennsylvania as an average state, and abstracted from the Report of the State Board of Charities the following statistics[1]:

There are seventy-eight "principal hospitals" in the state of Pennsylvania with a total bed capacity of 6,595 (nine hospitals failed to report their bed capacity, but they were small hospitals in the smaller cities and from general information of these hospitals I averaged them at 350 beds; this may be slightly incorrect but the other figures are officially correct.) The state of Pennsylvania had, at its last official census 5,258,014 inhabitants. This would be then one bed for every 797.2 persons. The proper equation of necessary number of beds in hospitals with a certain number of people has, as far as I know, never been worked out. A very just idea as to whether the number of beds is excessive may be obtained, however, by taking the average daily number of beds occupied during the year, which was 4,240, and compare this with the total number of hospital beds—6,595. This shows that there were 2,355 beds unoccupied every day of the year—or that more than one-third of the beds were unoccupied. This would seem to show that the hospital accommodations are far in excess of the requirements of even extraordinary emergency times.

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[1] Report of the State Board of Charities of Penn. for the year 1893 pp 322. ff.

Urban districts are much better (or worse?) supplied with hospitals than rural districts. For instance, the city of Philadelphia, with a population of 1,046,964 (census of 1890) has thirty-six hospitals, with a bed capacity of 4,464, or one bed for every 232.4 persons. The daily average number occupied was 2,877. So that every day, during the year, there were 1,587 unoccupied beds. The balance of the state, with a population of 4,211,050 inhabitants has forty-two hospitals, with a bed capacity of 2,131. The daily average number occupied was 1,363; this would leave 768 vacant beds every day. This is not an excessive number for emergencies, distributed as these hospitals are throughout the state. We must bear in mind that large cities, which are regarded as medical centers, attract patients not only from the whole state, but from other states also. The excess in the number of beds in large city hospitals, would therefore be, as far as the actual needs of the communities of the state are concerned, greater than the figures would show. Furthermore, when we consider that the hospitals furnishing the data for this comparison are the principal hospitals, and that there are a number of small institutions not reckoned in this enumeration, and that, with very few exceptions, the principal hospitals have a dispensary or outdoor departments which do a "rushing business," I believe the conclusion that we have too many hospitals and dispensaries is a just one.

The effect of this oversupply of free medical treatment encourages unworthy applicants and they prey on this charity. These institutions, once started, must prove their "reason for existence." The annual report must show a large and increasing clientele. They cannot, therefore embarrass applicants for treatment by questions as to their ability to pay a physician. It is an omnium gatherum. Rivalry between hospitals, and the struggle for patients, lead to some very exasperating advertising expedients, as all of us who have kept with the Eastern hospital and dispensary movement know.

The effect upon young physicians practising outside of hospitals must be not only exasperating but injurious in many ways. A physician, not connected with any hospital or dispensary, who goes to one of these so-called eleemosynary establishments and sees there, as is an every day occurrence, many well dressed women and men waiting amongst paupers for their turn to be examined and treated, must feel that if he is to continue practice, he will be driven to either a determined fight against the hospitals and dispensaries and break up this pauperizing practice or he must himself become a hospital or dispensary physician and so rebut their influence. Frequently these well-to-do people who go to these institutions for treatment say that they go there not so much to avoid paying a fee, though this they are glad to avoid, but because they are persuaded they obtain more careful examination and better advice, as men who have such large experience and such excellent facilities must be more skillful and better prepared in every way than those in private practice who have not had the benefit of hospital work and training. It is a very difficult undertaking for one young physician or even several to fight a well established institution. A very common result is, therefore, that the young physician calls together three or four confreres who are similarly situated: they interest some one with more money than judgment in a movement to supply, in a small and modest way, the poor of a certain quarter with free medical treatment, and forsooth, another dispensary or hospital is launched upon a suffering medical world.

It has become customary for well-to-do people who wish to pay, to seek hospital treatment in prolonged or serious ailments. This is doubtless due to the gradual conviction of people to regard hospitals as offering the best medical talent, and facilities for treatment very few individuals can command in their own homes. This in turn requires extensions of hospitals to meet this demand, an addition of private apartments, and has caused the establishment of many private pay hospitals. In our country where there is one physician to about every five hundred and fifty people, this hospital tendency must enhance the desire and increase the effort of young physicians to obtain hospital positions. This great demand for hospital positions is used by designing managers to replace without difficulty any member of their medical staff who for any reason may be "persona non grata." The eager young aspirant does not pause to consider that he may be doing an older colleague a great harm and may be assisting in a piece of great injustice. The managers have dismissed a physician, that is their own affair: the physician gone, the place is vacant: he may have it, he accepts. Another evil is, it must of a necessity cheapen in every way, but especially pecuniarily, the physician's honorari.

We may deny the fact and resist the imputation as much as we can, but this whole modern tendency has put a physician's service upon a commercial basis in the minds of the masses generally. The law of supply and demand must therefore prevail. Excellence will command its price but mediocrity will have to submit to low fees, or get none at all.

EDUCATIONAL PURPOSE OF HOSPITALS.

Almost, if not quite of equal importance with the charitable object, the educational purpose of hospitals should rank. All first-class hospitals not only permit, but are inclined to encourage clinical teaching and research. The higher education of physicians directly connected with a hospital is of vital importance to the whole community. Hospital work ought and must be one of research, and must therefore be experimental in many instances. In order to fully carry out researches the scientific affairs ought to be wholly under the control of the medical staff without any possibility of interference on the part of the lay management. Prejudice or bad judgment ought not to be allowed to interrupt valuable research, as occurred recently in one of our large cities, by a summary dismissal of a member of a medical staff by the lay-board because members of this board thought his experiment was not right, when it was perfectly legitimate and not injurious to the patient.

Study and research require much time and close attention, and should engross the whole time of an experimenter. If the United States is ever to fully compete in learning and research with continental physicians and clinicians, it will have to adopt in its hospitals, the system of fostering care of its medical men similar to that in vogue abroad. The hospitals in our country ought also to assure their physicians against the struggle for daily bread, and offer some degree of comfort for their families by paying a decent stipend to their incumbents. .In this way the necessity for making a living outside of the hospital will be removed and there will be no need for deviating energies and taking up time which ought to belong wholly, or for the most part, to the hospital and to researches which are only practicable in hospitals.

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The Blood in Sarcoma.

M. Motz, communicates researches concerning the blood of sarcomatous subjects. The cultures obtained from such blood show a very small micrococcus, simple or double anærobic, and staining with difficulty. This result was obtained in eleven out of twelve cases. Inoculation of animals was negative. He considers sarcoma an affection of the blood, localizing itself in the venous walls or capillaries and causing a thrombosis of the affected vessels. This infection of the blood will serve as a diagnostic measure in doubtful cases.—Am. Pract. and News.

TRANSLATION.

PATHOGENESIS OF HETEROTOPIC TUMORS[1].

Dermoid Cysts.

Translated for Gaillard's Medical Journal

By H. McS. GAMBLE, Ph.D., M.D ,

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When the topography of heterotopic tumors is considered, it is noticed that in each of their usual situations, they possess pretty constant anatomical characters. The dermoid cysts of the orbit and of its vicinity, those of the extremity of the eyebrow, which are among the more frequent, those of the face and the neck, have a very elementary structure. These are simple cavities with a cutaneous wall generally without papillæ or sudoriferous glands. Those of the thoracic and abdominal walls, or of the limbs, which are besides very rare, always have this simple structure. On the contrary the dermoid cysts of the jaw, of the sacro-coccygeal region, of the testicle, and those of the ovary, which are so frequent, are almost always more complicated. We very often therein meet with bones and teeth, and it is in these that are found rudiments of limbs, or even of the fœtus.

Ought not this relation between the complexity of tumors and their location cause us to believe that the pathogenesis varies, like the complexity itself, with the seat? I believe for my part, that such is really the case, and this view will perhaps render this very difficult question more clear.

The theories that have been devised to explain the pathogeny of heterotopic tumors are numerous, but there is not one which applies to all cases. It is an argument that might serve as a denial to them of all value if one admitted that these tumors are all identical with one another. I do not think, as I just remarked, that this is so. I believe on the contrary, that these tumors recognize, according to their seat and their complexity, different modes of formation.

Theory of Diplogenesis by Inclusion.—The first pathogenic explanation was attempted by Geoffroy Saint-Hilaire. It was he who built up that vast synthesis which, starting from the more simple dermoid cysts, those of the extremity of the eyebrow, for example, passes through the complex tumors of the sacro-coccygeal region, or of the ovary to arrive at the double parasitic monsters, and finally the double autositic monsters, such as the Siamese twins. This vast synthesis constructed, he seeks to explain in one and the same manner, the formation of all the degrees that constitute it in starting from the most complex forms. The double parasitic monsters, the Siamese twins, for example, are evidently two distinct beings united the one to the other. Since this pathogenesis explains certain cases of the series and the most complex ones, it ought to explain all the others. The most simple dermoid cysts ought then to be considered as an individual primarily distinct, which has become united to another and has undergone only a wonderfully incomplete development. Such is the theory of displogenesis by inclusion, which might be called the theory of double monstrosity, since it consists essentially in considering the tumor as the remains of an individual primarily distinct.

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[1] Extract from the first vol. of *Traité de Chirurgie Clinique et Operatoire*, published under direction of A. Le Dentu and Pierre Dilbet.

This doctrine has been strongly combated by Lebert and by Broca. The latter has observed that all dermoid cysts do not contain authentic débris of a fœtus; that some of them contain too much, as that which enclosed three hundred teeth; that it was difficult to understand how an embryo could penetrate into another in order to engraft itself into its abdominal cavity, or into its ovary. Lebert has shown besides that it was not rare to find dermoid cysts in both ovaries, which would lead to admitting, if the theory of diplogenesis by inclusion was accepted, that two distinct embryos had penetrated into a third.

These arguments possess great force, but they do not have a general application and cannot cause a complete rejection of the doctrine of Geoffroy Saint-Hilaire. It is very evident that the theory of diplogenesis by inclusion or the theory of fœtal inclusion, as is often said by way of abbreviation, cannot be applied to all cases. "It requiries," says Lannelongue, "a great stretch of imagination and much good will, to recognize in a simple dermoid cyst, in a simple little sack enclosed by the skin, often even without papillæ or sudoriferous glands, the representative of a distinct individual." This theory cannot be applied moreover to cases of dermoid cysts of both ovaries. But if it is not general, it does not follow that it has no value. It is the only one that can give a satisfactory explanation of those tumors of the jaw, of the sacro-coccygeal region, and of the scrotum in which are found fœtal débris. These complex forms, which always manifest themselves at a period near to birth, can only be due to diplogenesis. The tumor is an endocymien parasite, that is to say a more or less altered brother of the bearer.

Theory of Plastic Heterotopy or of the Neoplasm.—Lebert has taken exactly the opposite ground of Geoffroy Saint-Hilaire. The latter had looked at the series from above and Lebert from below. He compares the dermoid cysts with other neoplasms and admits their autogenous and spontaneous formation. They might be developed by virtue "of a peculiar aberration of nutrition." In truth, Lebert never sought to extend his theory to the complication forms, but, even as to the simple cases, it no longer deserves at present to be discussed. With the ideas now prevailing as to the specificness of the epithetliums, we cannot for a moment admit that the dermoid cyst, even the most simple, can be due to an "aberration of nutrition."

Theory of Enclavement.—This theory, which in Germany is often attributed to Remak, belongs in reality to Verneuil. It considers the dermoid cysts as being derived from the external integument through an infolding of a portion of the latter in the subjacent tissues. A small portion of the skin wrinkles, is depressed and finally surrounded, shut in by the adjacent tissues. This ectopied portion forms in developing itself the demoid cyst.

This theory is correct as regards many cases. It explains in a very satisfactory manner the formation of simple dermoid cysts, and the usual topography of the latter demonstrates in some sort that this theory is true. It is in fact in those regions of complicated development that they are observed, there where depressions ought to be obliterated, where portions of the integument may easily become imprisoned in the other tissues. Those of the orbit and of its surroundings are explained by disorders of evolution of the fronto-orbital fold; those of the neck by derangements of evolution of the branchial folds. These cysts ought therefore to be compared to congenital fistules which are so common in this region. They are in a manner fistules without an orifice.

In the cervical region are often found mucoid cysts, the pathogeny of which is explained just as simply in the region of the branchial folds, the internal, mucous tegument, may be pinched in as well as the external integument. These mucoid cysts derive also some defects in evolution from the lateral or median epithelial imagination destined to form the thyroid body.

In the sternal, abdominal, spinal, sacro-coccygeal and perineal regions, simple dermoid cysts may be attributed to accidents of evolution of the ventral or dorsal lamina. For those of the members, it must be admitted that an accidental plication of the skin has permitted the enclosure to be produced.

The theory of shutting in is entirely satisfactory as to simple cysts. It might be objected that the structure of the wall of these cysts is not identical with that of the skin, since there are wanting generally both the papillæ and the sudoriferous glands. But these two organs are precisely those of the external integument which are developed last. Their absence is thereto a fœtal character of the wall. It may be explained by admitting that the enclosure took place before their formation, and that they were not developed in the ectopied parts the evolution of which is greatly disturbed.

But if the theory of folding in (enclavement) readily explains the simple cysts, it encounters insurmountable difficulties when it is a question of complicated forms. Lannelongue divides the complicated cysts into two groups: those which contain multiple tissues, without special forms; others which enclose rudimentary fœtal parts. As to those which are more or less complicated, but which do not contain any fœtal parts, he thinks that they may be explained in admitting that not only the external integument, but also "the elements of the other tissues have been shut in or displaced." This becomes at once more difficult to understand. As for the tumors that contain at the same time dermoid cavities and fœtal parts, he admits "that the producing cause of double monsters is found associated with that which determines the formation of the cysts." There would be therefore two entirely different processes, concurring to produce a single tumor; on the one hand a center of supplementary development, a double monster which would explain the presence of fœtal remains, and on the other hand a folding in which might produce the dermoid or mucoid cavities. This explanation is not devoid of obscurity, and the folding in itself which Lannelongue considers necessary, is not easy to understand from the simple topographical point of view, if it is remembered that the complex tumors, whether containing fœtal parts or not, are developed the more frequently in the ovary or in the testicle. I say the testicle and not the scrotum. It is essential to clearly distinguish these two forms. The complex tumors of the scrotum are explained, we have seen, by diplogenesis by inclusion. But this explanation cannot be applied to the tumors of the testicle itself, the more so since the latter have been observed in testicles retained in abdominal incision.

When it is desired to apply the theory of folding in to the complex

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1 Case of Patu Observed in a horse.

tumors of the testicle and ovary, very great difficulties are encountered. Pouchet has well remarked that the external tegument is not in point of fact far from the first rudiments of the Wolffian body. It would nevertheless require a very deep fold of the integument in order to penetrate into the mass from whence the genito-urinary apparatus is to grow. His was still further off in considering the canal of Wolff as being developed at the expense of the ectoderm, but this manner of looking at it has not been confirmed by subsequent researches. To sum up, the theory of "enclavement," which is very reasonable for a certain number of cases, does not appear applicable to the complex forms.

Theory of Extra-Uterine Pregnancy.—This simple theory consists in considering the dermoid cysts as a product of conception of abnormal seat, that is to say as the result of an extra uterine pregnancy. This theory evidently cannot be generalized. However kindly we may regard it, we cannot attribute a dermoid cyst of the extremity of the eyebrow or of the testicle to an extra-uterine pregnancy. The theory cannot even explain the complex tumors of the ovary, for they have been observed in the new-born and in girls who are virgins.

Theory of Nodal Cells.—Bard has proposed a very particular theory. The author is a great partisan of absolute cellular specificity. But this specificity cannot evidently be primitive. The ovule and the first cells which are produced in it have the property of giving birth, by dividing themselves to daughter-cells different from the mother-cell and different from one another. These primary cells have therefore an extreme complexity, that is to say a power of evolution which permits them to engender the most different tissues. These are the cells which he calls nodal cells. In proportion that one gets away from the ovule, the complexity of the cells diminishes until the kinds are fixed. Each cell has then become specific and incapable of giving birth to cells different from itself. But according to Bard, there might persist in the tissues, even in adults, nodal cells which would preserve all their complexity, all their evolutive power and it would be the proliferation of these cells that might give rise to the growth of dermoid cysts. This curious theory is a little after the order of those hypotheses, which are readily taken for demonstrations, because they afford a certain satisfaction to the mind. But it cannot even be discussed; it escapes all argumentation, because the presence of the pretended nodal cells in the adult tissues is absolutely undemonstrable.

Parthenogenesis.—Parthenogenesis is the development of an ovule in embryo, irrespective of any fecundation. It is reproduction without intervention of the male element. This mode of a sexual generation has been observed in a certain number of lower animals in which it produces normal individuals. But we have been led to inquire if it could not manifest itself accidentally in the higher vertebrates and produce incomplete, monstrous, or rudimentary beings. Buffon and Isidore Geoffroy Saint-Hilaire have propounded this question to themselves. Waldeyer has shown himself friendly to this idea in attributing the production of the ordinary cysts of the ovary to the development of certain cells of the germinative epithelium which have remained inactive in the tubes of Pfluger. This theory is very probably correct. But there is no question, in the hypothesis of Waldeyer, of parthenogenesis properly speaking, for it has nothing to do with the development of an unfecundated ovule. It was Répin and Mathias Duval who first attributed clearly the formation of the dermoid cysts of the ovary to parthenogenesis, that is to say to the development of an unfecundated ovule. Répin, starting from the very remarkable case which I have just cited, in which there existed a clearly recognizable fœtus, passes in review the more simple forms and shows that all dermoid cysts of the ovary contain vestiges of organs. He concludes from this that they represent imperfect beings and as such can only be of ovular origin.

Besides the possibility of segmentation of the non-fecundated egg has been determined in a certain number of cases (1), one may even say, writes Mathias Duval (2), that parthenogenetic segmentation is an ordinary process, almost normal. But his segmentation is quickly arrested by fatty degeneration; it does not extend to the formation of a blastoderm, still less to that of even the most rudimentary organs. In order that a dermoid cyst be produced under the action of parthenogeneses, there must therefore be a particular influence, which completely escapes us, and in order to demonstrate in an absolutely exact manner the parthenogenetic origin of ovarian cysts, there is wanting a certain amount of evidence. It is true that the presence of fœtal debris logically leads to the conclusion that these cysts have an ovular origin; it is also true that it has been determined that the unfecundated ovum is capable of segmentation, but never has any one seen this segmentation go even as far as the formation of a blastoderm. Nevertheless Steinlin has made a very interesting demonstration, and one which is altogether in favor of parthenogenesis; he has seen a very young dermoid cyst, of the size of a hemp seed, situated in the interior of a Graafian follicle. In the case of a cyst a little more voluminous, which was of the size of a large pea, I tried to make a similar demonstration, but without clearly reaching any conclusion. I am very far from saying that this cyst had not originated in a follicle, but it is impossible for me to affirm it.

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(1) Mathias Duval ; "Surla segmentation sans fecundation" (Soc. de Biol., Oct. 25, 1884, p. 585.)

(2)Mathias Duval ; Ann. degynéc , fév. 1895, p. 119.

If the parthenogenetic formation of dermoid cysts of the ovary is not directly demonstrated, it may nevertheless be said that it is very reasonable. There arises no objection of a rational order; it counts in its favor two very important demonstrations, the frequent segmentation of non-fecundated ovules, and the intra-follicular location of the cysts at their commencement. While none of the preceding theories enables us to understand the formation of ovarian dermoid cysts, it satisfies all the desiderata. It explains the ordinary complexity of these cysts, their frequent bilaterality and the usual epoch of their development. It is from twenty to thirty-five years of age that the majority of cases are observed, at the time when the ovules arrive at maturity. If some cases have been observed among children, no objection should be drawn to the theory, for it is known that a certain number of ovaries arrive at maturity at the time of birth.

Pathogenesis explains very well the more complicated forms, but it may appear more difficult to explain along with them certain ordinary peculiarities of these cysts. In the first place it is certain that in dermoid cysts there is always a considerable inequality of development between the folds of the blastoderm, an unequality which is all in favor of the external fold. Répin, seeking the anatomical characteristic of monsters, declares that it is exactly the absence or the arrest of the development of one or two of the folds of the blastoderm. This is a begging of the question at the very outset, for it is making a rule of what would require explanation. Another equally embarrassing fact is that we quite frequently find in the complex dermoid cysts parts that are completely foreign to fœtal life and are on the contrary regarded as characteristic of adult life, or nearly so. Thus, for example, the teeth of the second dentition and the complete ossification of the bones. Geoffroy Saint-Hilaire has attempted to explain these singular facts by the slowness of the development of these cysts, or, if you please, by the length of gestation. It is certain that a dermoid cyst of the ovary usually takes several years to form and that permits us to comprehend how the development of the parts which are contained in it may go beyond the embryonary or fœtal stage. But it would be a little like being contented with mere words to consider this explanation as fully satisfactory, for it is very certain that there is no exact chronological relation between the age of a dermoid cyst and the degree of development which the parts that are contained in it have acquired. At all events, this explanation loses all its value when it is a question of certain singular cases like that in which were found three hundred teeth with the same cyst. We are obliged to admit that this parthenogenetic development differs profoundly from the normal evolution. Mathias Duval is inclined to admit that in these cases, instead of a single center of embryonary formation, there are two or three, and that we find ourselves in the presence of an anomaly which might be designed under the name of lack of individualization or of a polarity of the blastoderm." This conception is far reaching and possesses very great interest. Notwithstanding it is of a hypothetical character, it is certain that it is the most satisfactory of all.

As to the complete cysts of the testicle, I speak solely here of those of the testicle, that is to say those which are seated under the turnica albuginea and not in the scrotum; they may be explained also by parthenogenesis, as Mathias Duval has remarked, for the genital gland is primarily hermaphroditic. There are found in effect in the embryonal testicle primordial ovules just as in the ovary, and the persistance of these primordial ovules in the testicles until puberty, hermaphrodism of the gland, which is so frequent in certain invertebrates, has been observed even in mankind.

This exposition, which will appear perhaps somewhat lengthy, although it has been reduced to the fundamental portions, may be summed up in the following manner: The very different characters that the heterotopic tumors present, the dermoid cysts, to use the more current expression, and on the other hand the almost constant relation between their seat and their degree of complexity, lead to the conclusion that they are not all of the same nature and that they recognize different pathogenies.

It is very probable that the simple dermoid or mucoid forms, are produced by the mechanism of enclavement. But this theory is powerless to explain those cases in which are found embryonary débris. The complex cysts containing these débris recognize two different pathogenic processes, according to their location.

The cysts that might be called exterior, those which are situated in the region of the jaws, the sacro-coccygeal, perineal, or scrotal region, are due to diplogenesis. These are double monsters, brothers of their bearer, which have become atrophied and adherent to him like parasites. I can but point out here that these double monsters, which were attributed even recently to the simultaneous development of several ovules, have been considered, since the works of H. Fol, as due to polyspermism or hyperfecundation, that is to say to the penetration of several spermatozoids into the same ovule. The double monsters then spring from a single ovule, which might be resumed in a word by saying that the diplogenesis is uniovular.

The complex dermoid cysts, that is to say containing fœtal parts, but more profoundly situated, the cysts that might be called visceral, those of the ovary or of the testicle, are very probably due on the contrary to parthenogenesis.

Is this eclectic theory fully satisfactory? It permits us to explain the majority of cases, but it would be an exaggeration to contend that it leaves none of them in obscurity. Amongst those of which the pathogeny is most obscure must be cited those of the mediastinum. The greater portion are simple cysts which may be explained by enclavements formed at the expense of the anterior mediastinum or by invaginations of the aerial tree; but there are complex cysts. Thus the cyst of the anterior mediastinum reported by Gordon (1), which contained pieces of bone and seven teeth. It must be confessed that the pathogenesis of this case, otherwise almost unique, escapes us.

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Death As It Is.

Perhaps the most common mistake of the lay mind is the association of the dramatic with the conception of death. Nothing is more common than to hear from the pulpit pictures of excitement and alarm, of the death-bed scenes of those who have not lived religious lives, yet as a rule, if these pictures are supposed to be those of the unfortunates at the moment of death, they are utterly false. In point of fact, ninety-nine of every hundred human beings are unconscious several hours before death comes to them. All the majesty of the intellect, the tender beauty of thought or sympathy or charity, the love for those for whom love has filled all waking thoughts, disappear. As a little baby just born into the world is but a little animal, so the sage, the philosopher, the hero, the statesman, he whose thoughts or deeds have writ themselves into the history of the world, become but dying animals at last. A merciful unconsciousness sets in, as the mysterious force we call life slowly takes leave of the body. And what is has become what was. This is death.—N. Y. Med. Reporter.

(1) Gordon ; Medico-Chir. Transact., 25 Nov. 1823, Vol. XIII. p. 12 —London, 1827.

SELECTIONS.

THE INFILTRATION METHOD OF LOCAL ANESTHESIA.

BY BRANSFORD LEWIS, M.D.

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In 1894, at the German Congress of Surgeons, Dr. Schleich announced and detailed a new method of producing local anesthesia by the use of intra-cutaneous (rather than sub-cutaneous) injections of very dilute solutions of various drugs; and he indicated the distinctiveness of the method by terming it Infiltration Anesthesia. Later, the author treated the subject more extensively, and gave the results of its use in some three thousand operations, minor and major. During 1894, the method received some attention from the American medical press, and was put to practical test by American surgeons. The principle of the method consists in injecting intra-cutaneously certain solutions and dissipating the sensibility of the peripheral nerves by the pressure of the infiltrating fluid, by the anemia which it causes, and by the comparatively low temperature at which it is injected—three effects secured by the fluid itself rather than by any drug which it may contain. As a matter of fact, the drugs used are of only incidental importance.

It has long been known that the injection of fluids in some considerable quantity would cause a deadening of the sensibility of the part; but the induction of this insensibility has not been sufficiently controllable to place it within the limits of wide surgical practicability and the initial pain to which it would give rise, was another objectionable feature which discounted its usefulness.

By thought and much experimentation these problems, as well as others, have been practically overcome by Dr. Schleich, so that for the kind of surgery to which the injection of anesthetizing fluids is applicable, whether "minor" or "major," the use of the older cocainizing methods is liable to be entirely superseded by the infiltration method; and the position of chloroform and ether narcosis is already being assailed by those who have made practical use of it.

If a syringe-needle be inserted obliquely into the skin, the point reaching just below the epidermal layer, and a few drops of the proper fluid be injected there, an elevated wheal, looking like a mosquito bite, will be the result; and tests with a needle or knife immediately afterwards will show the entire area of the wheal to be absolutely insensible, while the sensibility of the skin just beyond the edematous area is not disturbed in the least.

Experimentation has shown that the promptitude and practical efficacy of the anesthesia so induced depend on several factors: (1) The density of the fluid used; (2) The character and strength of the drug or combination of drugs embodied in the solution; (3) The temperature of the latter; (4) the condition (of health or disease) of the tissues to be anesthetized; and (5) The maintenance of complete edema of the tissue to be operated upon.

Density of the Fluid.—It has been found that a physiologic salt solution 0.6 per cent would cause a wheal but not an anesthetic one; while a 0.2 per cent of salt solution produced sufficient anesthesia to allow of the removal without pain of a nevus from the neck of the eminent Dr. Bergmann. Solutions of sugar 3 per cent; potassium bromide, 3 per cent; morphine, 0.1 per cent; carbolic acid, 0.5 per cent; and caffeine, 2 per cent; all show markedly anesthetic effects, while above and below those strengths they become irritative and painful. This develops the second-named factor.

The Character and Strength of Drugs Used. While it is a fact that the various agents mentioned will produce anesthesia after a certain length of time, the first and primary effect of some of them is irritative, and they excite pain until their secondary anesthetic effect begins to prevail. In order to obviate this difficulty, use is made, in the formula, of certain drugs (cocaine, morphine) which in proper strength have an immediate anesthetic effect, thus doing away with the transient irritative effect of the other, secondarily, anesthetic drugs in the combination. This is especially important when considered in connection with

The Condition of Health or Disease of the Structures to be Operated Upon.—While the difference in the primary-irritative and the secondary-anesthetic effect may not be so sharply marked in normal, healthy tissues, as in the removal of a nevus, in the case of inflamed structures (crucial incisions into a carbuncle) it is markedly prominent; and unless it were prevented, it would defeat the purpose and advantages of the method. Happily, this is accomplished in either of several ways: By using such drugs in the combination (cocaine, etc.) as have an immediate anesthetic effect, even though diluted to the degree mentioned; by beginning the anesthesia in healthy structures and continuing it by successive injections into the unhealthy ones; by producing a temporary spray-anesthesia of the inflamed structures, sufficient to allow of the introduction of the infiltrating fluid. Of these, the first will be found to be most commonly useful; and it is for that reason, chiefly, that cocaine is used at all. However, the point must be emphasized that though cocaine is used in this way, it is vastly different from the manner of using it hitherto in vogue; since, instead of using a strength of from two to ten or twenty per cent, the strength entirely capable, by this method of producing the anesthesia desired, is that of one or two hundredths per cent; and instead of a very few drops producing a toxic (perhaps a highly dangerous) effect, one or two or three ounces may be used without the slightest systemic symptom.

Temperature of the Injected Fluid.—It has been observed that the same strength of solution, when used cold, is much more highly anesthetic than if it is warm. For this reason, it is advised to keep the bottle of fluid on ice before and during the operation.

Complete Infiltration.—Every tissue of the body, without exception (skin, muscles, glands, mucous membrane, nerves, etc.), becomes insensible to pain when infiltrated in the manner described. This obtains for bone and the hard structures, as well as the soft ones. Bone is reached either through infiltrating its periosteum or by injecting into the medulla. Nerve trunks are anesthetized separately, first by applying five per cent carbolic acid solution, and then, through this inserting the needle and fluid.

Only the infiltrated, artificially edematous tissue is anesthetic, the tissues just outside of which retain normal acuteness of sensibility. Consequently, in the course of an operation, with absorption of the infiltrated fluid, it is necessary to renew the injections or extend their area co-incidently with the operative field. After infiltration the anesthetic condition lasts from fifteen to twenty minutes.

With the proper fluid, anesthesia ensues immediately on its being introduced into the tissues, and lapse of time is not requisite for developing insensibility. This again, is in marked contrast to the effect of the older methods of producing anesthesia. Its advantage is great.

Hemorrhage.—Anemia being one of the effects of the method, it may be supposed that there will be less bleeding (oozing) than under ordinary circumstances. This is the case. And distortion of the tissues from the infiltrated fluid does not cause any especially increased difficulty in securing and tying or twisting bleeding vessels. Nevertheless in operating in deeper structures, the use of the syringe-needle involves the risk of piercing blood vessels, nerves, etc., for which care must be observed.

Formulæ—In his various surgical procedures, Dr Schleich finds the following three solutions of graded strengths to answer all purposes:

STRONG SOLUTION NO. 1.

℞	Cocain. muriat.,	gr. iii
	Morph. muriat.,	gr. i-3
	Natr. chlor.,	gr. iii.
	Aq. dest.,	ad oz. iii.

Mix. Sterilisat., adde sol. acid. carbolic., 5 per cent, gtt. iii.

MEDIUM STRENGTH SOLUTION, NO. 2.

℞	Cocain. muriat.,	gr. iss.
	Morph. muriat.,	gr. i-3
	Nat. chlor.,	gr. iii
	Aq. dest.,	ad oz. iii.

Mix Sterilisat., adde sol. acid carbolic., 5 per cent, gtt. iii.

WEAK SOLUTION, NO. 3.

℞	Cocain. muriat.,	gr. i-6
	Morph. muriat.,	gr. i-12.
	Natr. chlor.,	gr. iii
	Aq. dest.,	ad oz. iii

Mix Sterilisat., adde sol. ac. carbolic, 5 per cent, gtt. iii

Solution No. 1, Dr. Schleich uses for operating on inflamed or hyperesthetic areas; No. 2, for most operations; No. 3, for superficial operations on nearly normal tissues.

To carry out the aims of asepsis, he recommends that only sterile solutions be used; and to this end he advises that the reservoirs be sealed with scorched-cotton stoppers, and that from these smaller vessels should be filled at the time of operating.

I have made use of the infiltration method in operating on buboes (enucleation); in opening a prostatic abscess through the perineum; in circumcisions and some other minor procedures.

In working in superficial structures, its effect is all that one could wish and beyond criticism. While in the deeper parts of wounds such as met with in evacuating prostatic abscess, enucleating buboes, etc., it is more difficult to secure complete and absolute anesthesia, on account of the care necessary to prevent the injury of deep-lying structures, still, with the increased skill obtained by practice, objections on this line are removed and local anesthesia is effected with proportionately increasing success. It appears to me that testicular ablation, for instance, could be done without a particle of suffering on the part of the patient.

The after-pain I have not found to be greater than with other modes of anesthesia; and the other disagreeable after-effects of general anesthesia are, of course, avoided. Two of my patients were over sixty years old, yet they felt as well after as before the operations. No symptom of intoxication has become evident in any case that I have observed, and I have not been sparing in the use of the fluid.

I have made use of a larger syringe and longer needle than that recommended by the author, and I think this facilitates matters considerably, obviating numerous successive punctures in order to fill up the tissues sufficiently. The infiltration may be begun with a small syringe and fine needle and continued, without pain, with the larger.

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Renal Complications of Typhoid Fever.

Roth (Munchener medicinische Wochenschrift), cites a number of statistics in relation to the frequency of nephritis as a complication of typhoid fever. He mentions the observations of Mygge, who, systematically examining the urine of seventy-two typhoid fever patients, found albumen present in fifty-two. In half of these cases it was due to nephritis, in the other half to pyelitis or to cystitis. He refers particularly to cases in which the renal symptoms may be much more marked than those referable to the gastro-intestinal tract, and cites a case of a boy taken suddenly ill with headache, thirst, fever, and pain in the right loin. On admission, fourth day of disease, the urine was scanty, dark red, cloudy, contained considerable albumen, epithelial cells, numerous white blood-corpuscles; no casts. On the eighth day roseola were found; on the ninth day the spleen was palable; the urine contained albumen and epithelial cells from the pelvis of the kidney; no casts. The disease thus began as a pyelitis; it being only on the eighth day that the diagnosis of typhoid fever could be made. The constant absence of casts argued against nephritis. The patient recovered. Careful examinations will prevent the overlooking of pyelitis occurring during the course of typhoid fever, but in cases beginning as pyelitis the diagnosis may be obscured. Unless absolutely necessary in such cases the cold bath should not be used. During convalescence, great care must be exercised regarding the diet, especially in the use of albuminous foods.—Exchange.

ABSTRACTS.

Lumbar Puncture for the Removal of Cerebro-Spinal Fluid.

Dr. William Browning (Boston Med. and Surg. Jour.) states:

1. The method is simple, easily practiced, and rather attractive.

2. In itself it is usually without danger.

3. By it we certainly can draw off cerebro-spinal fluid.

4. The quantity removed at short sittings has been from one to one and one-half ounces in adults.

5. This, without doubt, represents the amount of free fluid usually present in the lower vertebral canal, even when occluded above.

6. In internal hydrocephalus the relief, if any, is but very temporary. In the common form, due to tubercular meningitis, the result is not worth the trouble, while in the closed or sacculated forms it must rather do harm than good.

7. As a diagnostic means, for example in suspected meningeal hemorrhage, it is valuable. As an index of pressure it may also be worth noting.

8. It is worth further trial: (a) as a passing relief in brain tumors not complicated by hydrocephalus; (b) as a substitute for trephining in progressive dementia; (c) in certain spinal troubles; (d) and possibly as a means of applying medication directly to the spinal meninges.

9. In conclusion, it may be said that, while admissible in all cases of brain-pressure, there is as yet no established indication for this procedure except for diagnostic purposes.—Am. Lancet.

Escharotics.

1. The value of caustics in the treatment of malignant disease depends upon the use of proper caustics and their intelligent application in suitable cases.

2. A proper caustic is one which completely destroys and removes the malignant disease.

3. Mild caustics are inefficient and dangerous, and therefore to be avoided.

4. Bougard's or Vienna paste is the most generally useful and escharotic.

5. Proper technique in application accentuates the value of caustics.

6. The suitable cases are those which have a limited extent and are easily accessible; or, in other words, cancer of the skin, lip and external, in their incipient stages.

7. The prognosis should be most excellent, cure resulting, in the vast majority of cases, when treatment is early and thorough.—Kansas Med. Jour.

The Care of the Ear During the Course of the Exanthemata.

The ear is affected in a large proportion of the cases of scarlet fever and measles, and the far-reaching nature of the mischief which results comes daily to the attention of the aurist. Of 501 cases of middle ear disease in children (404 with and 97 without discharge) 131 cases originated during an attack of measles, 63 during scarlet fever, 147 were catarrhal in origin and 101 occurred during the eruption of the teeth. Hence measles and scarlet fever give rise to two-fifths of the cases. In these cases the fauces and pharynx are usually affected to a greater or less degree, and the angina seems to have a special tendency to extend to the nares and Eustachian tubes. The wall of the affected tube becomes swollen, and may be entirely occluded, so that the morbid secretions, greatly increased as a part of the specific inflammation, are pent up within the cavity of the middle ear. This blocking of the tubes is much more likely to occur when there are adenoid growths in the naso-pharynx Tough mucus secreted by the naso-pharynx also plays an important part in sealing the mouths of the Eustachian tubes. The pain experienced is not neuralgic, as has been claimed, but is due to the pressure of the pent-up secretion in the middle ear. This stage may be reached suddenly, as when the child wakes from sleep, and may disappear as suddenly as soon as the discharge overcomes the obstruction and finds exit. Hot sedative applications seem at times to favor this result. This may occur as soon as the mass of mucus is dislodged from the post-nasal space, but it may continue until symptoms resembling meningitis are developed. The slighter cases, however, usually resolve without suppuration, leaving the ear drum intact. The author believes that posture has a great deal to do with the outcome of these cases, and that in simple catarrhal cases, the child running about in an upright position, the mucus is more readily removed from the naso-pharynx, and the Eustachian tubes drain better, than when the child is constantly in a recumbent position, as in scarlet fever and measles. From a prophylactic standpoint, the author advises from the very beginning of an illness in which there are catarrhal symptoms the frequent and strong use of the handkerchief to keep the nose and naso-pharynx free. If the child is too young the Politzer bag should be employed, the child, if possible, opening his mouth and breathing out strongly, or saying "Hick!" or "Ho!" The quantity of secretion dislodged and thrown into the mouth by this procedure will astonish one not acquainted with the use of the bag under these circumstances. In the rare cases where a rupture of the drum occurs from its use it is slit-like and heals more readily than perforation due to suppuration. In late cases, if inflammation does not give immediate relief, paracentesis of the membrani tympani should be done at once if found to be bulging with secretion. This is a simple and safe operation under four conditions: (1) To have the head securely held; (2) to have the membrane clearly visible and brightly illuminated; (3) to use an arrow-shaped paracentesis knife or myringotome with a shoulder; and (4) to puncture the membrane in its lower and posterior part, where the bulging is usually most marked. This slit heals readily after the escape of the contents, relieves the pain and saves the deeper structures of the ear and prevents the misery of a chronic otorrhoea, with its numerous attendant risks. Adenoids, of course, should be removed.—Downie, in British Med. Jour.

Two Cases of Congenital Cyanosis due to Stenosis of the Pulmonary Orifice with an Interventricular Foramen.

Dr. David Bovaird in the March number of the Archives of Pediatrics reports two cases of this character. Examination of the heart of the first patient gave the following points: Apex beat in fifth intercostal space one-half inch outside nipple line. Area of dullness increased considerably, but limited on right by mid-sternal line. Thrill perceptible with systole in second intercostal space just to left of sternum. Loud blowing systolic murmur to be heard all over front of the chest, but the loudest point where thrill is felt. The patient was a girl five years old, and presented the stubby form, the short neck, the puffy face, the clubbed fingers, the prominent abdomen, the blueness of face, lips and extremities, which are characteristic of the condition.

The author reports another case, that of a man whose peculiar blue complexion had attracted his attention several times while walking in Central Park. He was in apparent good health and presented no abnormality except his cyanosed complexion. Shortly afterward he was seen by the writer comatose in a bed in the Presbyterian Hospital. More careful examination of the heart gave the following results: Apex beat in fifth intercostal space just outside the nipple line. Cardiac dullness increased but limited on right by mid-sternal line. A systolic impulse in second space just to left of sternum. A marked thrill all over pericardium. A blowing systolic murmur heard all over the anterior chest, but loudest over the pulmonary valves. As he lay in bed, the cyanosis previously so marked had almost entirely disappeared.

He died shortly after. The autopsy showing was: Pulmonary orifice so narrowed as to admit only the tip of the little finger. Two cusps of the pulmonary valve adherent, fusing into one and at the point of union a hard nodule, no other changes in valve. The right ventricular wall so hypertrophied as to be thicker than the left, which was normal. In the inter ventricular septum just below the aortic valves a foramen readily admitting the index finger. The other valves and chambers normal.

The cause of death was found in an abscess of the brain with secondary meningitis. The correspondence in physical signs with those found in the children—the classical pathological picture, the apparent comfort of the patient during life, and the fact that he had reached the age of twenty-two years, make the case worthy of record. Furthermore, this case corroborates certain points made in the report of Dr. Northrup, namely, that cases of congenital cyanosis living more than two years are most probably cases of pulmonary stenosis, with some secondary compensatory defect to allow the right ventricle to dispose of the blood dammed back upon it; secondly, that hypertrophy of the right ventricle does not give dullness to the right of the sternum even when present in marked degree.

The cause of death seems worthy of some remark. Two of these three cases which have come to autopsy have had abscess of the brain. J. Lewis Smith notes the frequency of cerebral lesions in cases of congenital cyanosis. Eustace Smith found cerebritis and cerebral abscess in two of his cases, and speaks of a third with symptoms of a similar affection. Considering the comparative rarity of cerebral abscess, the association in these cases with congenital heart lesion is striking.

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THERAPEUTICS.

Creosote in Phthisis.

In Creosote we have a remedy productive of much good or a substance utterly worthless and even harmful. Today it is one, and tomorrow it is the other; but, as a rule, in either instance it is the physician or pharmacist and not the remedy that is at fault. Pure Creosote, properly and systematically administered, is without doubt one of the most reliable and standard remedies in the entire Pharmacopœia; and failure in its use is due to non-employment of a reliable product, or neglect to prescribe a proper method of administration. A pure beechwood Creosote administered in a proper way, as a rule, gives most successful results.—Ingraham, in Med. News.

The Nature and Treatment of Leprosy.

In a paper which was awarded the Alvarenga prize by the College of Physicians of Philadelphia (American Journal of the Medical Sciences), Ribb concludes:

1 That leprosy is a specific disease due to the presence of lepra bacilli.

2. That leprosy is influenced by race, climate, soil, food, etc., only in so far as these tend to enervation on the one hand or to physical well-being on the other.

3. That experiments have not demonstrated leprosy to be inoculable on man or beast.

4. That leprosy is hereditary.

5. That leprosy is contagious, infectious, and communicable under conditions not yet understood.

6. That leprosy is both mitigable and curable.

7. That chaulmoogra oil is a drug of unquestionable value in the treatment of leprosy.

8. That leprosy may be completely eradicated from the list of human ills.

Proper Time to Give Medicines.

The Medical and Surgical Reporter gives the following advice as to the best time to administer acids, alkalies and other classes of remedies: Alkalies should be given before food. Iodine and iodides should be given on an empty stomach when they rapidly diffuse into the blood. If given during digestion the acids and starch alter and weaken the action. Acids, as a rule, should be given between the digestive acts, because the mucous membrane of the stomach is in a favorable condition for the diffusion of the acid into the blood. Acids may be given before food when prescribed to check the excessive formation of the acids of the gastric juice. By giving it before meals you check the osmosis stomach-ward of the acid-forming materials. Irritating and dangerous drugs should be given directly after food, such as the salts of arsenic, copper, zinc and iron, except where local conditions require their administration in small doses before food. Oxide and nitrate of silver should be given after process of digestion is ended; if given during food, chemical reactions destroy or impair their special attributes, and defeat the object for which they were prescribed. Metallic salts, especially corrosive sublimate, also tannin and pure alcohol, impair the digestive power of the active principle of the gastric juice, so should appear in the stomach during its period of inactivity. Malt extracts, cod-liver oil, phosphates, etc., should be given with or directly after food, so that they enter the blood with the products of digestion.

Management of Eczema in Children.

The paper on the above subject (Am. Jour. of Med. Sciences), was read before the British Medical Association by Dr. Malcolm Morris, who called attention to the following points: First, Are internal remedies required in Eczema? If so, what are the indications which should guide us in their use. Speaking generally, internal medication is not required unless some constitutional dyscrasia underlies the skin affection. In chronic eczema, unaccompanied by constitutional dyscrasia, local treatment may be relied upon entirely, when the disease is inflammatory. Antimony is most valuable. In neurotic cases, the sheet-anchor is opium. If this disagree some other sedative may be given. If the neurotic element shows itself as depression, quinine may be combined with the opium; if the discharge is abundant, belladonna may be combined with the quinine. Phosphorous, strychnia, and arsenic are useful in selected cases, but the last must be used with caution, or harm will be done instead of good. Cod-liver oil and general tonic treatment are indicated when malnutrition and anæmia are present. Iron is contra-indicated when acute inflammation is present.

Second. The influence of diet in eczema. The author does not believe that the diet has any influence, except indirectly.

Third. What are the principles on which the local treatment should be carried out? Speaking generally, every case should be treated as if it were of parasitic origin. The objects aimed at, in its local treatment are, first, to destroy micro-organisms; second, to protect the inflamed surface from the air, and further microbic invasion; third, to soothe irritation.

The principles upon which the local treatment is to be carried out are as follows:

Soothe when the inflammatory process is acute.

Stimulate when it is chronic.

In either case, keep the parts continuously under the influence of antiseptics.

The Value of Somatose.

In the Berliner Klinische Wochenschrift, No. 46, 1894, Dr. P. J. Eichhoff reported the case of a man suffering from severe syphilitic and mercurial cachexia, who gained ten pounds in weight during the administration of Somatose for a period of four weeks. The subsequent history of this case, which illustrates well the remarkable reconstructive properties of this new food-product, is narrated in the Deutsche Medical Zeitung, April 11, 1895, and is of sufficient interest to merit consideration. Although fully persuaded of the value of Somatose, in this case Dr. Eichoff suspended its use in order to try another preparation which had in the meantime been brought to his notice. This was administered under the same conditions attending the previous use of Somatose, but instead of improving in nutrition the patient lost the ten pounds previously gained. The administration of Somatose was therefore resumed with the result that a gain in weight of four and a half pounds occurred in the course of three weeks, which continued even after the preparation was discontinued. On the ground of his experience the author concludes that Somatose is an excellent nutrient which is readily assimilated and by stimulating the digestive organs enables them to dispose of a larger amount of other food. Attention has also been directed by other observers to the remarkable property of Somatose of stimulating the appetite, in which respect it differs from all other food-products. For this reason as well as because of freedom from irritating effects upon the gastric-intestinal tract, it is eminently adapted for the nutrition of persons suffering from acute and chronic gastric and intestinal affections such as cancer or ulcer of the stomach, gastritis, cholera morbus, intestinal tuberculosis, dysentery, etc. In these cases it will not tax the digestive organs and as it is readily assimilated and completely utilized will rapidly produce a gain in flesh and strength. Being odorless and tasteless Somatose can be readily administered to children and fastidious persons, even without the patient's knowledge. It may be given in milk, tea, coffee, gruels, brandy and water, or in some forms of Somatose chocolate, Somatose cocoa, and crackers, which represent agreeable palatable and nutritious preparations, especially suitable for chronic invalids and convalescents.

Treatment for Accidents Due to Electricity.

At a recent meeting of the Académie de Médicine, a report of which appears in the Journal des practiciens, a paper was read on the treatment of such accidents, in which the following methods were recommended in order to establish respiration: 1. Rhythmical traction of the tongue. This treatment consists in opening the patient's mouth (if the teeth are locked, forcing them open), and then seizing the anterior part of the tongue firmly between the fingers of the right hand, covered with a piece of linen cloth in order to prevent slipping, and making strong and repeated rhythmical tractions, each followed by relaxation, imitating the rhythmical movements of respiration, twenty times, at least to the minute. The lingual tractions should be practiced without delay and persistently for half an hour, an hour, or longer. 2. Artificial respiration. This treatment consists in putting the patient on his back, with the shoulders slightly raised, the mouth open ,and the tongue well disengaged. The arms should be seized as high as the elbows and pressed rather firmly on the walls of the chest, then separated and carried above the head, describing a circle; afterward they are brought to their first position on the chest. These movements should be repeated about twenty times a minute, and continued until natural respiration is established.

It is advisable to begin always with traction on the tongue, applying at the same time, if it is possible, artificial respiration. On the other hand, it is equally advisable to try to revive the circulation by applying friction to the surface of the body, by striking the body with the hands or with wet napkins, by throwing cold water on the patient from time to time, and by making him inhale ammonia or the fumes of vinegar.—International Board of Health Magazine.

Sodium Bicarbonate in Diseases of the Stomach.

The Revue Internationale de Médecine et de Chirurgie Pratiques publishes an article on this subject by M. Dujardin-Beaumetz, who remarks that the first indication of the employment of alkalies is found in Chomel's work on dyspepsia. He described all forms of dyspepsia, muscular or chemical, and he was careful to insist on the treatment of alkaline dyspepsia and acid of dyspepsia. For the latter, he laid stress on the usefulness of vichy water and salts.

With regard to the use of sodium bicarbonate and its influence on the digestion, says the author, Jaworski, Gegel, and Abend maintained that it increased the acidity of the gastric juice. Hayem employed Winter's procedure, which tended to show that sodium bicarbonate might increase or diminish the acidity of the gastric juice, according to the dose administered and the time at which it was given. Small doses before meals cause an increase while large doses taken after meals considerably weaken the acidity. In 1893, M. Linossier and M. Lemoine presented a very important paper to the Académie on the action of alkalies on the digestion. The conclusions, based on a large number of analyses, were important, and M. Dujardin-Beaumetz gives the substance as follows:

1. Sodium bicarbonate excites gastric secretion.

2. When the dose is small, the increase of acidity is slight and variable.

3. When it is a medium dose the increase of hydrochloric acid is considerable.

4. When the dose is large, the period of excitation is prematurely arrested.

5. The excess of hydrochloric acid varies according to the doses, reaching its maximum with small doses in two hours, with medium doses in three hours, and with large doses in four hours.

6. The bicarbonate should always be given an hour before eating.

7. At the beginning of a meal the administration of the bicarbonate appears to suspend the secretion of pepsin. After the meal the exciting action becomes attenuated.

8. Sodium carbonate also gives results somewhat analogous to those of sodium bicarbonate. These results says the author, are of much importance although they have not been entirely admitted by all experimenters.

With regard to clinical results, when three ounces of vichy water are taken in two doses at an interval of half an hour, also when the dose is doubled, the acidity of the gastric juice is increased. Here the dose of sodium bicarbonate does not exceed 8 grains, for vichy water contains on an average sixty grains of bicarbonate in a pint. The author thinks that the remarkable action of vichy water in intestinal putridity and the secondary infections which result from it, particularly infectious icterus, results from the same fact,—that is, from the increased activity of the gastric contents one of the most powerful antiseptics is hydrochloric acid, and one can understand that the increase of this acid constitutes an essential element of intestinal antisepsis.

There is another factor—the catarrhal element—which may be mentioned. Excess of hydrochloric acid is, in a large majority of cases, a matter of irritation or of congestion of the gastric mucous membrane, and in this case the alkaline waters act as a dressing to the inflamed mucous membrane, having qualities comparable to those of blood-serum; they have an effect, in contact with the mucous membrane, in causing osmosis, quieting and relieving congestion.

The author often associates the bicarbonate with intestinal antiseptics as follows: salol, benzonaphtol, and sodium, each, 150 grains. This is to be made up into thirty capsules. In cases of hyperchlorhydria he increases the sodium bicarbonate to 300 grains and decreases the salol and benzonaphtol, each, to 75 grains. One capsule is to be taken during the meal and another four hours after.

M. Dujardin-Beaumetz concludes that,—

1. In chemical dyspepsia, in cases of hypochlorhydria, the dose must be given an hour or half an hour before eating, and in hyperchlorhydria during the meal or from three to four hours afterwards.

2. In muscular dyspepsia, when there is a tendency to stasis or to dilatation of the stomach, the dose should be given during the meal or an hour afterwards.

3. That the best alkaline waters to be employed in the treatment of diseases of the stomach are those containing sodium bicarbonate.—N. Y. Med. Jour.

Alumnol.

"Alumnol," says Dr. A. Stipanics, of Buda Pesth, "is a combination of aluminium salts, with naphthol-sulphonic acids. It is a white powder, of sweetish astringent taste, more soluble in warm (40 per cent.) than in cold water, scarcely soluble in alcohol and insoluble in ether and glycerine.

"The solutions possess an acid reaction, precipitate gelatine and albumen, but re-dissolve the precipitates in excess. Concentrated solutions are irritant and penetrate into the tissues, but are not caustic.

"The most astounding success with alumnol is met with in acute catarrhal affections of the mucous membrane of the larnyx; the hoarse and aphonic patient regains the full tone of his voice after a single inhalation, but inhalation must be several times repeated to effect a permanent recovery. Examination with the mirror shows reduction and paleness of the swollen mucous membrane. In cases where much mucous was present, Stipanics frequently saw the formation of a snow-white crust.

"Inhalations made for comparison with aqueous vapors and with tannin demonstrated more fully the extraordinary favorable result obtained with alumnol. A most brilliant success is to be expected where the hoarseness is due to severe catarrhal swelling of the mucous membrane, or to modifications in the tension and vibrations of the vocal chords, or to copious secretion of mucous. The mucous becomes granular and easily expectorated.

"In acute affections ½ to 1 per cent. inhalations were prescribed, without being followed by any decided symptoms of irritation. Also, in chronic forms in which silver nitrate proves useless, alumnol, in the form of powders, with 2 to 10 parts of alumnol to 10 parts of starch, were most effective. Alumnol likewise exercised a good influence upon the catarrhal symptoms of luetic and tubercular processes, but no specific action upon the malady itself."

My experience with alumnol has been so satisfactory that I deem I am only doing my duty to the profession to report the use I have made of it. Bearing in mind my prejudice against such preparations to commence with, I think I can truthfully say that there would have to be genuine merit in any of these preparations to make me take such a step as I have done in reporting the case below.

Case 1.—Acute rhinitis and laryngitis, with almost complete aphonia. Cold had been severe for two or three days, and during the day the aphonia had developed. Wishing to attend a reception that evening, he was very much worried over the loss of voice. After opening the nasal cavities well with a spray, the larynx was found, on examination, to be very much inflamed and congested; the epiglottis, inter-arytenoid commissure and cords were all inflamed. After using the usual astringents, etc., and getting no results, I suggested that we try a spray of alumnol. He readily assented, and I do not know which of us was the most surprised. I confess I was astounded at the results. In two minutes his voice had resumed its normal tone. I used a two per cent. solution of the drug. Fearing the result would be only temporary, I suggested that he call at my hotel on the way to his reception in the evening, and I would give him another treatment with a hand spray. This he did at 9 P. M. (the first treatment was given him at 5 P. M.), and to my surprise there existed only about one-fourth of the amount of aphonia which there had been four hours previously. The hand spray immediately relieved this, and he attended the reception, and on his return to my office; on the following morning, not a trace of it existed.

Case 2.—Physician who accompanied the one mentioned above. I had been treating this gentleman for quite a while for a simple chronic rhinitis, with an inflammation that extended to the larynx and bronchii. Being a professor in one of our medical colleges, he found great discomfort in delivering his lectures, especially when the existing condition would be aggravated by an acute exacerbation. This had occurred on this day, and he had partial aphonia. The result was in every way as satisfactory as the Case 1. I have frequently used this on the same gentleman since, and have never found it to fail. If used an hour or so before speaking, I find that there is not half the discomfort that formerly existed. The chronic condition is yielding to treatment, and I see no reason why the cure will not be permanent.

Case 3—Lady singer; soprano; acute laryngitis with partial aphonia. This lady is a choir singer and teacher in young ladies' college. A year previous she had some difficulty in reaching the proverbial "high C," and I found the trouble to be entirely reflex from the nasal passages. After relieving the pressure there, she had no further trouble until she contracted a very severe cold by exposing herself at a theatre in an evening dress. After examining her I found she could only reach C in low register. After usual treatment of cleaning passages, etc., I applied a 3 per cent. solution of alumnol, sprayed well into the larynx during adduction and abduction. In two or three moments I repeated this spray, and she immediately ran the scale to high C, holding the latter note with absolute clearness and without effort. This treatment was repeated in the afternoon, and two days later eliminated all symptoms of trouble.

Case 4.—Lady; professional singer; mezzo-soprano; acute rhinitis, laryngitis and bronchitis, with complete aphonia. The lady's voice had the same range as one above mentioned, with a clearness and steadiness of the middle and higher register I have seldom heard equaled. The throat tones were usually very clear and emitted with seemingly no exertion whatever. She had been under my care occasionally for two years. During the extreme cold weather that existed in our city in January, she contracted a general inflammation of the air passages. When I saw her she was suffering very much, and could only whisper in speaking. Under treatment mentioned above, she improved at once, and was dismissed in a week, cured.

Case 5.—Lady choir singer; soprano; complete and absolute aphonia. This lady, who has been under my care for over a year, contracted a case of la grippe, which has left her very susceptible to colds since that time. She was under the care of Dr. N. O. Harris, of this city, when I was called in to suggest what to be done in regard to the nasal complication that she was suffering from. She apparently recovered, but has not been in perfect health since. In February she contracted a severe cold, and came to my office daily for treatment. This was a case where everything I tried made as complete failures as I have ever seen. In spite of the most heroic and persistent treatment, she had complete aphonia for nearly three weeks. I could restore her voice, partially, with the alumnol and cocaine spray, but it would only be for an instant. Though, in the end, her voice returned, I am satisfied that the treatment in no way aided in accomplishing the result. She was assiduous in the use of sprays, remedies, etc., but nothing I could devise seemed to afford the slightest benefit, except in mere temporary relief from the pain that she underwent.

Case 6.—Lawyer; politician; aphonia. This gentleman was assisting in the political campaign, and had spoken in different sections of the state daily for two or three weeks. The meetings he addressed were held in the open air, and as he is an enthusiastic speaker, and when warmed up upon a subject is apt to draw very heavily on his voice, he had reached the stage that he could only speak with great difficulty and pain. Having to address an audience in this city, he presented himself to me that morning, "completely played out," as he expressed it. I found, on trying the usual remedies with the alumnol, I could restore the voice, and gave him three treatments during the day, the last about an hour before going on the stage. His voice held out perfectly, he informed me the next day, until he finished his speech, and then "collapsed entirely." Seeing that there was clearly a neurosis connected with it, I had him cancel all his dates for a week, when, after daily treatments, he was able to resume and, without difficulty, finish the campaign.

Case 7.—Officer of Fifth Regiment, Georgia State Troops; partial aphonia. This gentleman had been under my care for some years, had occasional attacks of laryngitis, and a chronic inflammatory condition of the pharynx and post nasal space. He applied to me for relief from partial aphonia, as the troops under his command were called out on some occasions. In two days the condition was entirely obviated with the treatment described in above cases, and he had no trouble in giving his commands on the day of the parade.

Case 8.—City official; acute tonsilitis with aphonia. This official was suffering with an acute tonsilitis, causing a general inflammation of the larynx as well. Occupying the position he does, it is necessary, at each meeting of the mayor and aldermen, to use his voice almost constantly. This case resisted all treatment in regard to restoring the voice until the tonsilar inflammation partially subsided, when it yielded very readily and no further trouble was experienced.

Case 9.—Actress; prima donna; soprano; acute laryngitis with partial aphonia. I was sent for hurriedly to see this lady about one hour before time for her to go on the stage. She had consulted a physician an hour or two previous to my arrival, but had experienced no benefit in regard to restoring the pitch or tone of voice. Not having time to take her to my office, I sprayed the whole air passages as well as I could with a hand spray. This I repeated every fifteen minutes until four treatments had been given. She went on the stage and did very nicely, though she told me afterwards that she "faked" wherever she could. Was very much improved the next morning, and wrote me two days afterward, from Memphis, that she continued the spray for a couple of days with absolute relief. Shortly after her return to New York she was again attacked with the same trouble, and wired me, asking my presence. It being impossible for me to leave at the time, I wired her the prescription of alumnol I thought advisable, and it, she afterwards informed me, gave almost immediate relief.

I could add many more cases to the above, but I think that this number, of the most marked that I find on my book, will show that there is merit in this preparation. I have used it in nasal work, though not enough to bring anything new concerning its value in that line of work, though I am sure it gives good results as an astringent, and mean to push my investigations further in this line.

In summing up my experience with it, I will say that I do not think any specialist in nose and throat work can afford to be without this valuable drug, which has given me results, I am free to say, I cannot derive from any other preparation with which I am familiar.

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Awarded to Charles Marchand's Glycozone by World's Fair of Chicago, 1893, for its powerful healing properties. This harmless remedy prevents fermentation of food in the stomach and it cures:

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One ounce of this new Remedy is, for its Bactericide Power, equivalent to two ounces of Charles Marchand's Peroxide of Hydrogen (medicinal), which obtained the Highest Award at the World's Fair of Chicago, 1893, for

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Glycozone is sold only in 4-oz., 8-oz., and 16-oz. bottles, bearing a yellow label, white and black letters, red and blue border, with signature.

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SOLD BY LEADING DRUGGISTS.

of this great nation, beside the splendid memorial here described, of a foreign theorist, any less appropriate and artistic testimonial of the great patriot physician of the Revolution? Your committee are not forcing upon you any man of local or sectional reputation. His eulogists are your great men among the living and the dead, in this country and abroad. For the sake of the good name of true Medicine, do not delay this work longer. Let every state, territorial and county medical society in the United States hold special meetings to act upon it. Let every delegate and member at the recent meeting at Baltimore bear in mind that he was specially constituted at that meeting a member of the Rush Monument Committee, and the duty imposed upon him of collecting funds. Your committee, therefore, earnestly appeal to the professional pride of every reputable doctor of medicine in this country to forward his contribution at once to Dr. George H. Rohé, Secretary, at Catonsville, Md."

The movement has the earnest support of the association and is discussed in the leading editorial of a recent number of the Journal, in which it is said:

"The project has now gone too far to be abandoned. A monument of some kind will be erected, but whether it will be a commanding structure of artistic excellence, befitting the man and the profession, depends upon the amount of money subscribed. It will be a humiliating contrast if in one portion of the capital city of this country there shall stand the splendid memorial of a little band of homeopaths, and in another an humble pile of bronze and granite eked to its utmost possibility, by some self-sacrificing sculptor, as the measure of the liberality and appreciation of over one hundred thousand physicians of him, who, in the words of a great living physician, was the greatest physician this country has ever produced.'"

It is earnestly to be hoped that these appeals will not be unheeded.

Publication of Formulas.

Articles appear in the medical journals from time to time urging the passing of laws which would require that the formula of every proprietary or patent medicine should be printed on the label. This would, undoubtedly, accomplish considerable good. The true publication of the formula of most proprietary preparations would unquestionably largely reduce their sale. The fact that they are usually composed of well known and commonly used elements, when they happen to contain anything of value, would remove the one great incentive to their use. Secrecy is a potent charm to many. A preparation with a high sounding name backed up with certificates of ministers and prominent citizens regarding their value frequently seems to have much more potency than would the plain bicarbonate of soda and gentian of which they are composed. There has at the present time a strong feeling arisen in favor of requiring the publication of the formula. It is even becoming a fad among the proprietary medicine men and they are beginning of their own accord to attach the alleged formulas to their preparations. The futility of the law requiring such publication, unless it were strictly and conscientiously enforced is clearly shown by the following formula which, it is alleged, describes the composition of a well known proprietary remedy:

"Formula.—A combination of coal tar derivatives of the series $C_n \; H_2 \; -_6$, into which the amines have entered forming the various amido-compounds. . . . .has at its base the derivatives of the amido-benzoles, so combined as to obviate the bad effects caused by many of this series of organic bodies when administered alone."

Dr. Gould in the Medical News ridicules the idea that such a rule now advocated by certain medical journals, would be of any value unless it were carried out in the strict spirit as well as in the letter of the law. He concludes an editorial in a recent number of the News with the following highly instructive description of a new cure for consumption in the words of the proprietor. "Up to this time we have not revealed the constituents of the gas, but feel that it is now time to do so, and learn whether or not, since it is open to the profession to know the truth without violation of ethics, they will take heed of it. I will take this step because a number of physicians who have witnessed the results of my work think it may be the opening of a new era to medicine. So, without attempting to detail all the steps of my discovery, I name those elements which constitute the essential active principle in the Electro-Inhalent Consumption Cure.

Formula—Calc. chloride, Potas. bromide, Potas. chlorate, sodium chlor., alum, c. p. oxygen.

These elements, treated with static electricity, give rise to an antiseptic gas of the most peculiar form. It is unlike anything else hitherto known both in nature and effect, etc."

The most truthful part of this formula is the sentence which describes the "gas" as "peculiar." Dr. Gould refers to the present tendency to publish the formula as a delightful recreation of the fin de siècle nostrum-vendor. One wonders which most to admire, the enormous impertinence of the publisher or gullibility of the public. The most serious part of the whole matter is the fact that this gullibility is not confined to the lay public. By what justice or right can the medical man criticise his patient for using patent medicines when he daily prescribes preparations of whose composition he is absolutely ignorant?

It is a common impression fostered by residents of this country of foreign birth that the American is retrograding and is not only losing ground physically but is less prolific than formerly. The fact cannot be denied that large families are less common at present than they were fifty years ago. This is not peculiar, however, to the United States. The birth rate per thousand has diminished during recent years in every civilized country. The rate of decrease is not greater in this country than in others. In 1890, according to recently published tables, the birth rate was higher in Austria than in any other country, the German Empire being second in order. Following this comes the United States with a rate of 30.7 per thousand of population. Following this very closely are Denmark, England, Scotland, and Norway. Ireland, contrary to popular impression, is one of the lowest in the scale, being but 22.3, France alone being below it at 21.8. The decrease in Ireland during the past decade was, however, less than in many other countries. The population of the United States is to be sure made up of many nationalities, but as all of these nationalities show more or less decrease in the birth rate during the last ten years it is but fair to suppose that the decrease among native born Americans is but little, if any, greater than the average decrease in other countries. Although Americans will persist in taking more patent medicine than any other people, there is no evidence at hand to show that they are less healthy, or that they are deteriorating materially.

The bicycle seems to have caused an attack of hysterics on the part of the Post-Graduate. The attack is mild and evidently will not prove serious. It bewails the fact that grave and reverend seniors in our profession are seen riding along the cobble stones in golf suits instead of comfortably in their victorias. It believes that the time that used to be spent in serious scientific pursuits is now shortened to enjoy a ride up the Boulevard. Then comes the remarkable statement that the bicycle has cut down the scientific activity in the New York profession at least fifty per cent. already. This must be hysteria for nothing else will account for it. Although the medical profession in company with the rest of the world has surrendered to the bicycle in a most surprising manner the dire extreme pictured by the Post-Graduate has certainly not been reached. We do not believe that one per cent.

or any per cent. of scientific activity has gone from the medical profession of New York. In fact the added clearness and vigor of mind resulting from an hour upon the wheel is fully capable of compensating for the loss of time. The time employed in work is not the only factor. The vigor with which the work is done is as important. If the bicycle has had any effect it has been to improve the standard of scientific work.

:o:

The Mental Condition in Chorea.

Dr. A. Breton, after an investigation of a large number of cases of chorea, has arrived at the following conclusions in reference to the condition of the mental powers in patients suffering from this complaint. He has found that the majority of cases of chorea are complicated by perversion of mental processes more or less marked. The psychical symptoms may be divided into two groups: in the first he places those which include alterations of moral sensibilty, of character, of intelligence, want of attention, and loss of memory and of affection for those nearly related to the patient; and in the second those which occur more rarely, such as "night terrors," hallucinations, and what Dr. Breton terms "folie choreique." The first class of phenomena are so common as almost to form one of the ordinary symptoms of chorea. Fright, terrors, and hallucinations are generally observed at night, just when the patient is falling asleep; those of sight generally predominate, but more rarely there may be observed those of hearing, taste, smell, or even touch. Affections of speech may also be mentioned, affecting the muscles of the tongue and lips, not caused by chorea, but due to mental causes. "Folie choreique" may take the form of simple mania, of delirium, of mania with hallucinations, or revert to a melancholic form, with profound depression and suicidal tendencies. Recovery from the mental symptoms in acute cases of chorea usually follows the cessation of the motor symptoms caused by the chorea; they cease when convalescence from the primary disease is established. But the neurosis may pave the way for permanent psychical trouble, such as moral degradation, mental alienation, and dementia. Dr. Breton, however, believes that the more pronounced psychical phenomena met with in the course of chorea are not directly due to the disease, but only receive from it special characters. They are complications rather than symptoms proper, and hereditary taint can always be traced; and he would look upon them as mental phenomena occurring in patients who have a hereditary tendency to such attacks, which have been precipitated by chorea.—Lancet.

PROCEEDINGS OF SOCIETIES.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

DR. WM. J. GORDON, President.

Dr. Jas. W. Henson read a paper on the History of Cholelithiasis and the Anatomy relating to that disease. He drew attention to the size of the cystic, hepatic and common bile ducts in their various parts, to the size of opening on the papilla and to the relation of the duct, artery, and vein in the transverse fissure of the liver. He stated that there were few muscular fibres in the coat of the gall bladder, and these did not have much power.

Dr. H. H. Levy said he was very much under the impression that the muscular elements of the gall bladder and ducts were very important, and if so, they must exist to some extent.

Dr. Hugh M. Taylor: In connection with the anatomy of the gall bladder, there are two important facts of which no mention has been made: 1. The rich system of lymphatics which, in certain conditions will aid the diffusion of septic matter. 2. The rugae of the mucosa, which predisposes to inspissation of the bile and formation of stone.

Dr. H. H. Levy read a paper on the Physiology of the Bile and Gall-bladder and the Etiology of Cholelithiasis. The color of the bile varies, as does its consistency. When fresh, it is slightly viscid, due to the mucus of the bladder and ducts. Normally, it is of a neutral reaction, but may be alkaline, or even acid. The important constituents are: 1. Mucus, prone to decompose and cause alterations in the chemical constitution of the bile. 2. Bile salts, taurocholate and glycocholate of sodium. 3. Pigments, the chief being bilirubin and biliverdin, the former often occurring in combination with alkalies. It is similar to haematoidin. 4. Cholesterin in small amounts, characterized by being laevo-rotatory and occurring in rhombic plates that seem to have one corner broken off. 5. Diastasic ferment. 6. Traces of urea. 7. Inorganic constituents: salts as found in most other secretions and a considerable amount of CO_2 in fresh bile either free, or in combination.

The small amount of cholesterin is noteworthy. The secretion is not a mere filtration, but a product of the liver cells, always going on, greater at times than at others. It does not pass immediately into the intestine when digestion is not taking place, but regurgitates to the gall-bladder where it is kept until needed.

The quantity secreted in twenty-four hours is about $\frac{1}{14000}$ of the body weight; and the period of greatest flow into the intestine is about 3 or 4 hours after the ingestion of food. Circumstances influencing secretion are: 1. Food.—Nitrogenous increases it more than vegetable, while fatty foods have no effect. 2. Water in large amount, increases the quantity, but lowers the specific gravity. 3. Other things equal, an increased blood supply increases the quantity, and vice versa. 4. Any conditions increasing disintegration of the red corpuscles, increases the quantity of bile.

The flow is influenced by 1. The vis a tergo. 2. Descent of the diaphragm pressing on the liver in inspiration. Negative pressure produced by inspiration, also aids it. 3. Contraction of the muscular fibres of the bladder and ducts. 4. Stimulation of the cord as by passage of food into the stomach and duodenum. In connection, a practical point to note is, a small amount of resistance to outflow is sufficient to cause stagnation of the bile.

Disposal of the Bile.—The water aids the maintenance of the softness of the fœces. Mucus passes out unchanged. The pigments do not appear in their own forms in the excretions, but as hydrobilirubin, urobilin, and stercoblin. The meconium of the fœtus contains the pigments unchanged. The bile salts are mainly reabsorbed. Cholesterin and lecithin are found in the fæces.

Composition of Gall-stones.—Cholesterin constitutes, by far, the greatest number, but all do not contain it, and, often, it is mixed with fatty or saponaceous matters, or pigments. Some are composed of bilirubin (mostly in combination with calcium), in strata or masses of cholesterin. Hydrobilirubin may alone come from them; also may glycocholate and taurocholate of calcium. Many are made up of fatty acids and soaps. Mucus and epithelium occasionally constitute small stones, or the nuclei of larger ones. Sometimes they are formed of the oxides of the heavy metals with, occasionally, nuclei of globules of mercury; and sometimes, there is a chalk stone of the earthy carbonates. The nucleus is mostly composed of a little mucus from the gall-bladder. The physical characters are varied, some being white, simple, and homogeneous; but more commonly, they are mixed either in radiations from the nucleus or in concentric rings around it. The crust is nearly always of pure cholesterin, but sometimes it is formed of fatty acids, coloring matter, and cholesterin.

Etiology.—The oldest supposable cause for the formation of gall stone is inspissation, but it is rare to find all the constituents of the bile, except water, in a single stone. Other theories are, lessened secretion of sodium, action of an acid; increased amount of lime, forming with the pigments a nucleus; secretion of calcium from the mucous membrane of the gall-bladder. All stones, however, do not contain all these substances. Formation is chiefly due to the precipitation of some one substance and this does not occur until the glycocholate or taurocholate of sodium decomposes, when the reaction is changed to acid. In order that the concretions should be of any size, it is necessary for the bile to be retained in the gall-bladder or ducts, for some time. Sometimes erosions are found in the stones, caused, occasionally by depositions; sometimes they divide and these conditions make their disposal easier of accomplishment.

The influence of age on the formation of biliary calculi is difficult to understand, unless it be due to the habits and changes age brings. They are most common over 25 years. Females are more prone than males, three to two. Multiparity predisposes, as do diseased conditions anywhere; morbid changes in the liver and its passages, cancer adhesions to various organs. Another case is sedentary habits. Too long intervals between meals favors stagnation. It is doubtful if there exists a diathesis, predisposing to stone.

Dr. Taylor quoted Murphy, of Chicago, who says the gall-bladder plays an insignificant part in the storage of bile. If this is not so, removal should be attended by disastrous results upon the system. In fact, it is not. It is always found filled with bile whose specific gravity varies from that of the liver. It subserves the purpose, says Murphy, of controlling the discharge—making it continuous—by keeping up tension like the second bulb of an atomizer. A puncture of the gall-bladder does not contract and the bile continues to flow from it, demonstrating the absence or inefficiency of the muscular fibres.

Dr. Landon B. Edwards contended that if the bladder acts as a second bulb, it must do so continuously, causing it to empty itself, eventually. Then if a puncture allows the continuous escape of bile, where can it come from? The bladder may act as the first bulb, but to his mind, the second bulb idea is erroneous.

Mark W. Pyser, M.D., Secty. and Reporter.

MEDICAL NEWS AND NOTES.

A monument to Professor Bilroth will soon be erected in the court of honor of the University of Vienna. The Council of the Faculty has also decided to erect a monument to Skoda and Rokitansky.

According to Dr. James N. Hyde there are five hundred and sixty lepers in the United States. Of these, California has one hundred and fifty-eight, the largest number found in any single State.

The seventh annual meeting of the Tri-State Medical Society will be held in Chattanooga, Tuesday, Wednesday and Thursday, October 8th, 9th and 10th. A large attendance is expected. An attractive program is announced. Papers have been promised by Dr. J. L. Murfree, J. B. Cowan, J. E. N. Woodbridge, R. P. Johnson, W. E. B. Davis, Richard Douglas, E. M. Cunningham, and others.

During the years 1889 and 1890, 2,200 patients were treated by Professor Pean in his service at the Hospital St. Louis, and more than a thousand were operated on. The number of deaths directly attributable to the operations was seven. From 1864 to January 1, 1892, M. Pean removed 2,100 tumors of the abdomen and pelvis. Of the 585 new operations performed, 47 alone were unsuccessful.

A bill has been introduced in the Illinois Legislature providing for the establshment of a hospital for the insane to be managed on "homeopathic" principles, whatever they are. The existence of the "homeopathic" sect shows some mental aberration but this is the first public admission we have seen that any considerable proportion of them required confinement. There is nothng infinitesimal about the proposed appropriation, as the bill provides for an expenditure of $400,000.—Pacific Med. Jour.

Conan Doyle, who has acquired some reputation as a story teller, deals in a recent tiny volume with the subject of hypnotism. One would naturally think that his medical knowledge would have saved him from writing nonsense, when dealing with such a subject. It unfortunately has not. A work of fiction should not be fictitious in every respect. From its perusal one should gather some grains of truth and goodness. The volume in question is an out-an-out fiction.—Montreal Med. Jour.

The National Sanitarium for Consumptives at Fort Union, New Mexico, has been opened under the direction of Dr. W. D. Gentry. This vast property has been given by the heirs of the late Benjamin F. Butler, and consists of a military post which cost the government several millions to erect. There are one hundred and fifty buildings, including garrison quarters, and these will be let free of rent without regard to color, religion or politics, to consumptives. The post was built to accommodate twenty-five thousand troops. The climate and atmosphere is considered particularly desirable for this class of patients, and this magnificent opportunity is furnished at a minimum cost as it is only required of those going there to furnish their quarters.—Chicago Med. Record.

We are now prepared to defend the dude. One thing can surely be said of him: he looks clean. Not one little part of him, simply, but the whole individual. His collar is not melted with the heat of many summers; neither are his shoes covered with the sands of time. His linen is not stained with the drippings of a tobacco press; neither are his teeth covered with the green algæ of antiquity. His face is not the sign of a poor barber; neither are his fingers plowed with the deep fissures of the bichloride. The dude is surgically clean.—National Med. Review.

A few years ago a journal was started in New York in response to "urgent calls" and "to fill a long-felt want"—a journal printed in the German language, edited by German doctors, and intended for German medical readers exclusively—the Deutsch-Amerikanische Medizinische Zeitung. It was exceedingly exclusive in all departments but one—it allowed Americans, or others than Germans, to advertise in its pages; nay it even solicited advertisements from them. Advertisers, however, are a curious lot and have queer ideas, and for some reason they did not seem to appreciate the great privilege thus extended them; and so the Deutsch-Amerikanische Medizinische Zeitung recently went dead, giving up the ghost quietly. Its death was the natural sequence of an anachronism. German physicians in America become, or should become, American physicians, and speak, or should speak, the English language. Of all peoples who come to our shores they soonest naturalize themselves; and so it comes about that attempts like that of the Deutsch-Amerikanische

Medizinische Zeitung to keep up a race-feeling must fail for lack of support.—Med. and Surg. Jour.

The present agitation respecting the Homeopathic Medical College at Michigan University is of interest. Under the arrangement described this college failed to command itself to the homeopaths so that the members of this sect practically repudiated it. Hence its classes so diminished as to compel the regents to seek some other method more satisfactory to all parties. The plan which thus far has seemed to meet the wishes of the regular faculty, the board of regents, and a portion of the homeopathic faculty, was the abolition of the so-called Homeopathic Medical College and the placing a professor of homeopathic materia medica and practice of medicine in the faculty of the regular school. The final decision has not yet been announced. But that the deans of both the regular and homeopathic faculties, and the regular physician on the board of regents, should unite in seeking to place on the faculty of the regular school a homeopathic professor, is significant of a drifting quite startling and the more so as no public protest has been made against it by the regular profession. Other State universities than that of Michigan, having medical departments, are arranged along similar lines. These are all more or less responsive to the demands of the popular will, and this will, generally speaking, demands the full recognition of one or more of the "pathies" and "isms."—Connor.

A member of the New York Academy of Medicine has recently written a letter to the Herald of that city, to show how slanderous is the view held by some, that all druggists pay physicians a percentage on all prescriptions. The letter was elicited by an alleged humorous paragraph, in a former issue of the Herald, declaring that "the doctor draws a fat commission from the till of his accomplice, the apothecary." As the writer remarks, no good end is met by the publication of slurs of that kind; what little effect they have is all in the wrong channel. They simply tend to confirm an unjust prejudice unwisely accepted by ignorant laymen. The letter states that in two decades of active pratice he never met with one such commission-paying druggist. The following is a part of the letter: "I have practiced medicine for more than twenty years and I am happy to say that no such offer has ever been made to me. A physician's reputation and success depends not only upon the skill with which he prescribes, but quite as much so upon the care and accuracy with which his prescriptions are dispensed; and hence he recommends his patient to a certain drug store, or a choice of certain drug stores, where he is sure the conditions will be fulfilled, and he warns them against other stores of a less respectable and frequent class, where unqualified boys are allowed to handle important drugs, where it would be practically impossible to maintain a full line of drugs in good condition and where if they do not happen to have the article called for they do not hesitate to substitute something else."

An Electric Street Car Ambulance designed by Dr. George Homan, Health Commissioner of St. Louis, and built by order of President Scullin of the Union Depot Street Railroad Company of that city, has recently been put into commission. The car is thirty-three feet long, the inside measurement being 24 feet by 7 feet 2 inches wide. The platforms occupy only half the width of the car, thus allowing broad steps. The entrances are at each end of the car. The car is well ventilated, and is lighted and heated by electricity. The interior of the car is divided into two compartments for males and females. The equipment of the car includes several stretchers, blankets, instruments, dressings, etc. The car is to be manned with an ambulance surgeon, a male nurse and a motorman. It will run on schedule, and track facilities will, it is hoped, be provided at the various hospitals. The idea of the car originated with Dr. Albert Merrell, but Dr. Homan planned it, and after futile endeavors to secure it by legislation obtained it through the street railway company.—Chicago Med. Rec.

It is difficult to speak of the treatment of Dr. Kershner with perfect calmness. At the time of this writing the decision of his case by the Secretary of the Navy has not been made public. We trust most earnestly that it will be favorable to Dr. Kershner, but even if it be so, we are sure that the medical profession, and especially those who have personally known Dr. Kershner, will feel that he has been treated at the court martial with the grossest indignity and injustice. Dr. Kershner's career as a surgeon in the United States Navy, for the past thirty years has been that of a skillful, conscientious, industrious and courageous man. He has served his country and his profession well, yet on account of a matter which even taken at its very worst, could not be considered grave, his career has been cut short and his whole future blighted. Those of us who have known and appreciated the sterling qualities of Dr. Kershner, feel the greatest sympathy with him in the trouble through which he has passed, and whatever the outcome, he will know that his friends in the medical profession are as staunch and as numerous as ever.

The treatment of the surgeons of the United States Navy by the other officers of that department has made the position of a medical man in this service most intolerable. They are not admitted to equal rank, nor do they receive the same recognition as the men in the other branches of the service, and they are subjected to indignities which it is difficult for a self-respecting man to tolerate. The result is that the medical profession of the country has begun to regard the Naval Department with suspicion, and it is very difficult for it to secure the proper quota of medical officers for the Navy. We believe it will be still more difficult since Dr. Kershner's court-marshal, for that scandalous procedure has shown how little chance a medical man has for justice at the hands of his so-called brother officers. The medical profession, or those who respect themselves, will probably hereafter refuse to enter the Navy until there is some assurance that they will be treated as gentlemen as well as medical men. We have already heard of a number of young men who have been deterred from entering the competitive examination, by reason of the indignation held toward this service by the profession at large.—Post-Graduate.

The first extensive revolt against the written law under consideration occurred in New York. It was preceded by an extremely bitter conflict, and caused not a few ripples in the American Medical Association. The result of this revolt was that the friends of the written law established the N. Y. State Medical Association and retained their allegiance to said law, while the opponents captured the old State Society, abrogated the written and returned to the unwritten law. To many this seemed a revolutionary proceeding, but when it is remembered that the revolting faction simply returned to the first principles of the medical profession, principles which satisfied the profession during thousands of years, the matter assumes a different aspect. The reformers only abrogate the written law of 1847, preferring the larger individual liberty of the profession anterior to that date. Previous to this, Massachusetts had a contest along similar lines, which resulted in affording sectarians equal rights with regulars, and turning popular prejudice against the medical profession.

The medical profession originated in the effort to systematically relieve human suffering and promote human health. Amid the glimmerings of dawning science it jealously guarded each addition to its knowledge, and incidentally contributed largely to the advancement of science. In every age parasites have sought to ally themselves with the medical profession that they might use its resources to plunder a suffering, credulous humanity. To exclude such parasites from the profession has ever occasioned perplexing thought, and for this purpose the unwritten custom of centuries was maintained, and to add still more in the same direction, in 1847 the American Medical Association adopted the written law of consultations now in force. But from the facts presented, it is clear at the present that this law fails of its beneficent design. Large bodies of physicians no longer regard the written law as in accord with the nature of the medical profession, and believe that this law should either be abolished or made to accord with the changed condition of our environment.—Leartus Connor.

A Parable.

A certain man was hanged, and he died, and he left two sons, honest men. Now, one of these sons was a blacksmith; but the other became a physician. And after their father had been taken from them, these brothers made their homes in other lands. And the blacksmith would have prospered, but it befell that one asked him how his father made end. And the blacksmith, looking angrily upon him, answered : " He was hung." For the blacksmith was an honest man. Howbeit, presently, when a horse was missing, men gathered and hanged the blacksmith, saying : " This man must take after his father." So the blacksmith did take after his father ; but whether he caught up with him the tale telleth not. And, at the same time, in his own city, one inquired of the physician by what means his father died. And the physician covered his face and wept. But whilst he wept, he considered, saying within himself : " If I say, 'he was hanged,' then shall I shock this man, and give him pain. Nevertheless I must tell the truth." He said, therefore: "My father died of heart failure." And again he wept, the questioner weeping with him. Then this being told, men said : " Doubtless, since his father died of heart failure, this good physician and loving son hath made study of kindred diseases." So they resorted unto him. And the physician became a specialist, and he looked at them who came in and coughed once and sneezed twice, and demanded $100. And they gave gladly. For the physician was an honest man.—Exchange.

The Keeley Cure.

We think that when the methods of our investigation are described the reader will conclude that whatever prejudice we have cannot possibly have affected the result.

We have and, still have, a prejudice against Dr. Keeley regarding him as pursuing quackish methods and governed primarily by the desire to make as much money as he can, and believe that that is the chief reason of the keeping of his remedies secret.

Nor can we say our prejudice was diminished on finding the Keeley Institute of Maine sending to the physicians of that State a typewritten circular, signed by the "president," of which the following is the first paragraph:

"In realization of your high professional as well as social standing in your community, and the amount of force your words would bring to bear upon the unfortunate subjects for whom this treatment is calculated, I have determined, in order that such subjects who require but a word of encouragement from their physician to place them in an institution where they can be lifted from the dreadful bondage which surrounds them and makes their lives a burden, not only to themselves, but their families as well, to give a commission of $15 for every patient (male or female) brought to this Institute for treatment."

Neither was our prejudice favorably affected by finding that whenever a person relapses the plan is to denounce him as an idiot, or demented, or accuse him of not having wished to be cured.

Nor was it removed by the seemingly plausible proposition to allow us to bring drunkards to Dwight to have them treated in order that we might report the effects. We consider that proposition intended to deter us from making the investigation, or in case of our refusal to put us in the position of refusing what would seem to be a genuine offer. We do not accept it, because, among other reasons, we do not happen to have on hand a number of drunkards "numerous enough to index general results." And if we had, we could not take them to Dwight, "go with them ourselves, visit every treatment for twenty-eight days, mingle freely with the long line of patients in attendance there, take them home with us, and watch their progress toward a life of sobriety for days, weeks, months, and years."

If the Keeley Cure was just being launched upon the country, it might be reasonable to say to a respectable journal whom the proprietor had interested in his remedy, "Bring on your patients; we will charge you nothing for medicine or treatment, and you can see the effect;" but even then the company agreeing to the terms of this proposition would have to wait some "months or years" before a testimonial would be valuable. But the Keeley Company claims to have sent out more than two hundred thousand cured men into all parts of the United States.

In our personal acquaintance of those who have taken the Keeley cure—not one of whom was demented or did not wish to reform—a little over fifty per cent. have relapsed. The ministers and physicians who have responded to our inquiry have their list of personal acquaintances, and they can tell us what they know.—Christian Advocate.

An Outbreak of Typhoid Fever.

In the recent severe outbreak of typhoid fever at Stamford, Conn, all the cases have been traced to a foul well in the stabling shed of H. R. Blackham, a retail milk dealer on Greenwich avenue, in that part of the city known as Waterside, and it is stated that not a single instance of the disease has occurred in a family which was not supplied with milk by this dealer. Blackham is accused by the citizens of having watered his milk, and it is said to be a fact that he sold milk at a lower rate than other milkmen ; but he claims that he merely washed his pails and cans in the water from the well. At all events Health Officer Hexamer has made a complaint to the Public Prosecutor against him, and he will have to defend himself in the courts on the charge of violating the city ordinance regarding the selling of unwholesome food. Dr. T. Mitchell Prudden, of New York, who made the analysis of the water of the well for the Stamford authorities, says, in his report on it: "The number of living bacteria of various kinds in one cubic centimetre is 69,660. This number of living germs would be reasonable in sewer water or a cesspool, but indicates in a well which is being used a gross contamination. It may be interesting, as a matter of comparison, to know that the Croton water of New York contains 156 germs to one cubic centimetre. This is a fair average number for good surface water; which, as a rule, is liable to contain more bacteria than that of properly constructed wells." The Common Council has ordered this well and a number of others in the immediate neighborhood closed. It is easy to understand how its waters could contain typhoid fever germs, in addition to other bacteria, as it has been found to receive the direct drainage of the privies of several small dwellings which stand on rising ground within twenty-five feet of it. Dr. W. P. Northrup, of New York, who was called in consultation to see the infant of Dr. E. J. Mechs, who was one of the sufferers, states that the number of children under two years of age who had well developed cases of typhoid was remarkable. He had the opportunity of personally examining quite a number of them, and he ascertained that they had all been fed upon the Blackham milk.—Boston Med. Jour.

New Regulations at the New York Quarantine.

The Treasury Department acting in conjunction with the Health Officer of the Port, Dr. A. H. Doty, has instituted easier conditions for the large steamship companies who bring to the New York harbor so many thousands of first cabin passengers every year. The arrangements are not consummated, but the coming summer travel will probably be provided for in such a way that incoming steamers may pass up as late as 9 P. M. Passengers arriving in New York on the great ocean liners will then be able to leave the ships and take their baggage with them without delay, no matter at what hour of the day or night the ship may reach port. The Treasury Department will soon have the necessary arrangements by which the baggage of steamers reaching New York after sundown will be inspected and passed at once. At present, if a vessel reaches her pier after the sun goes down, nothing is done until the next day, and though the passengers may leave for the night, they must return for their baggage the next morning. This is a cause of much annoyance, especially to passengers desiring to take trains from New York the same night they arrive. The companies will make a great saving of money by this concession, but they will be obliged, under the arrangements made with Dr. Doty, to provide a powerful diffused electric light for the examination of the passengers. The satisfactory examination of steerage passengers has not heretofore been considered a possible thing after the decline of the sunlight. By the use of a suitable electric lighting plant, carried by each of the vessels, that will come in under the new rules, the medical examiners will be able, it is stated, to pass upon all debatable cases as well after sundown as before. It is electricity, as applied to this use, that has enabled the authorities to venture on the change. Whatever may take place later, it is not proposed to extend the time after 9 o'clock in the case of any of the liners until the present concession has been thoroughly tested. Infectious disease manifesting itself among or from recent immigrants should receive careful attention of local Officers of Health in every State, as a means of determining whether the night admission through the port of New York is a temporary innovation or a fixture.—Jour. of the Assoc.

The Seventh Annual Meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee promises to be of more than passing interest.

The meeting will be held in Chattanooga, Tuesday, Wednesday and Thursday, October 8th, 9th and 10th. There is every reason to believe that it will be largely attended and of unusual importance.

MISCELLANEOUS.

The Treatment of Fractures in Children.

Leblois concludes a study of fractures in children and their treatment as follows: Fractures in young persons differ from those in adults by the frequency of their seat at the junction of the epiphysis with the shaft, the preservation of the periosteum and the rapidity of union. This last fact is due to the greater activity of the elements that participate in the reparation of bony tissue. Frequently an excess of this process gives rise to the formation of an undue amount of callus. Such a hyperplasia in the case of fractures about the joints may result in interference with the restoration of normal mobility. Protracted immobilization must be carefully avoided in the treatment of fractures about joints, and should give way to massage and early passive movement. The treatment of fractures in children by these methods is in most cases attended with excellent results, both as to the speediness of recovery and the restoration of function.—India Med. Record.

The Removal of Foreign Bodies From the Cornea.

Mechanics and workmen have learned from oculists (who should have taught them better) the method of removing foreign bodies from the cornea by "picking them out" with some sharp or slightly blunted metal instrument. In every factory or workshop every day, and often many times a day, it occurs that pins, knives, etc., are thus blunderingly used, frequently with great injury to the cornea, with the resultant formation of corneal ulcers, keratitis, iritis, or at least, leucomata. All text-books of ophthalmology advise the use of the "corneal spud" for removing such particles, and every young physician supplies himself with the instrument. But it is the most outrageously ill-adapted for the purpose conceivable. It is impossible for any patient to hold the eye still enough to permit any hand thus to remove a partly-imbedded grain of sand, or emery, or what-not, without wounding the epithelium of the cornea. For this purpose a rigid tool is absurd, and a rigid metal instrument is the acme of absurdity. Every physician should teach workingmen how easy it is, and how free from any danger of injury, to remove the great majority of foreign bodies on the cornea with a simple wisp of cotton. Any particle not thus removable should not be sought after with pen-knives, awls, pins, or spuds, but the patient should be sent to a physician. Twist a little wisp of absorbent cotton, having long fibres, upon itself until the fibrils are well caught, but are not too densely packed upon each other. Fold the roll upon itself and grasp it half an inch from the rounded or curved extremity. The eyelids are held apart by the fingers of the left hand, and the patient instructed to look in such a direction as to bring the foreign body into view. By delicate, though firm pressure, the wisp of cotton is brushed, not too quickly, across the cornea, or it is given a slight twist or screw-like movement when deftly pressed against the cornea. Almost invariably the dust-particle is removed at the first trial, being entangled or caught by fibrils of the cotton. Cocaine, blepharostat, spud, time, labor and injury are all dispensed with and happily spared. The procedure may not be for the commercial advantage of the specialist, but it is worth more to the world than seven "original researches" and prize essays.—Med. News.

Concerning the Responsibility of the Epileptic.

Dr. Valan reports an interesting case, in which the responsibility of a criminal suffering from epilepsy was questioned in court. The father of the prisoner was addicted to liquor, and committed suicide; the mother and grandmother had suffered from epilepsy. The prisoner was 28 years old, short, but well-built, and had had epileptic attacks since he was 11 years old. In 1885 he had been sent to jail for vagrancy; in 1889 he was found guilty of larceny; soon afterward he was again convicted of larceny and sent to prison for 5 years. While here he frequently had attacks of epilepsy. Soon after he was released from prison, he committed a burglary and was caught at it. He succeeded in making his escape, but was rearrested, and at this time confessed the crime. A few days afterward he tried to commit suicide, but the attempt was probably only pretended. A month afterward he had an epileptic attack, with a delirium of short duration, and as this attack was repeated from time to time, lasting as long as 48 hours, he was sent to an insane asylum. He was afterward found to have no recollection of what happened during two of the delirious attacks. During the free intervals he was lucid, but irritable, stubborn and bashful. During the early part of his confinement in the asylum, he repeatedly made an open confession of his crime, but afterward he pretended not to know anything about the burglary. About six weeks after his admission to the asylum, he made an attempt to escape. In the written opinion of the case, which the writer presented to the court, he testified that the prisoner was an epileptic, but that at the time he committed the burglary he was not delirious, and was, in fact, not affected by the disease from which he was suffering, as he himself admitted. During the trial, the prisoner at first claimed not to recollect anything about the crime, but finally confessed all, and was sentenced to five years in the penitentiary.—Annales d'Hygiene Publique—Allg. Zeitschr. d Psychiatrie.

How to Give Pills to Children.

Dr. A. K. Bond, of Baltimore, Md., writes as follows: "I order the quinine sulphate in pill form with dilute acid, generally aromatic sulphuric acid, and direct the mother of the patient to break up each pill and mix it with a little brown sugar. This is put upon the tongue dry, and a mouthful of water carries it into the stomach. I have never heard of any objection on the part of the patient. Sometimes I suggest that a small fragment of sweet chocolate be broken up and used instead of brown sugar, or that it be taken into the mouth before and after the bits of quinine pill and sugar. A stick of licorice root may be used in the same way. In this way a very little of the masking substance suffices at each dose. The pill of quinine sulphate made with aromatic sulphuric acid is not only very soluble but also in its smallest possible bulk.

"It will readily be seen that by means of the pill broken with brown sugar or other masking agent any drug or mixture of drugs which can be made into pillular form may be administered to children with facility. Since it occurred to me to try this method, I have never felt the need of masking mixtures for such prescriptions. Moreover, the mothers of the children take kindly to the plan."—Exchange.

Sprains and Their Appropriate Treatment.

Primrose (Canadian Practitioner) holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For this immediate treatment of a recent sprain pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the middle of the leg. The amount of wool must be considerable; loosely applied, it should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton-wool. This usually alleviates pain immediately by affording pressure to the blood-vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is re-applied to prevent further effusion. In ten to fourteen days cotton-wool may be dispensed with and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion and do harm if employed too long.—Therap. Gazette.

Prognosis and Treatment of Croupous Pneumonia,

Dr. Percy Kidd, refers only to two drugs—opium and strychnine. Indications for opium are—severe pain that cannot be controlled by other measures, insomnia, restlessness, and delirium. Contra-indications—symptoms of exhaustion of the respiratory centre, such as shallow labored respirations, drowsiness, and tendency to cyanosis. Opium may be given in one full dose at bed-time, 10 grains Dover's powder, or one-sixth to one-fourth grain morphia hypodermically. Respirations are generally reduced by 10 or 12 in the minute, the pulse is usually unaffected, or shows a transitory reduction in the number of beats.

In the use of strychnine Dr. Kidd supports Habershon's view of the importance of administering it hypodermically on account of the slow absorption from the stomach, and also agrees with Habershon's opinion that the efficacy of strychnine is due to its action on the excito-motor apparatus of the heart and on the respiratory centre. This view supports indirectly the theory that in pneumonia we have to fear the influence of the toxines on the nervous system, cardiac failure in this disease being chiefly, on this hypothesis, an expression of exhaustion of the nerve-centres. Strychnine should be given in doses of one-sixtieth grain injected into the gluteal muscles. Action, in increasing tension, size of pulse, and vigor of respiratory movements, often manifested in 10 to 15 minutes. In delirium sometimes strychnine seems to act more satisfactorily than alcoholic stimulation, probably indirectly through the cardiac and respiratory centres.—Practitioner, Med. Chronicle.

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ORIGINAL ARTICLES.

EXPERT TESTIMONY.[1]

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It is expected, I presume, that this topic shall be discussed critically, and in the severer sense of that word. The history of expert testimony would no doubt be an interesting story, certainly its employment must have been coeval with the establishment of regular jurisprudence. In the Old Testament we find several allusions to expert decision on highly important cases. The diagnosis of leprosy is committed to the charge of the priests under the operation of a general sanitary law and reference is also made to the determination of virginity.

It is the almost unanimous opinion of intelligent people that expert testimony as at present exhibited in our courts of justice offers much ground for unfavorable criticism. Not only do the newspapers frequently inveigh against it in general and in given cases against the experts themselves, but judges often express severe condemnation in their rulings and opinions. Indeed in many cases professional men are seriously discredited by the very fact that they are called to the witness stand in a professional capacity. Sometimes the court picks out of the conflict between expert opinions a judgment in favor of one side. Thus, in a suit brought in a Philadelphia court by an ignorant laborer who had been first employed about a factory as a carter and subsequently hired to work in a room in which strong acids were used and through his ignorance was poisoned, expert testimony was produced on both sides. One set of experts testified that the gases were dangerous and that the employer—who was a trained chemist—should have known the fact; while another expert testified that the gases could not have caused the illness. The court of last resort in affirming a verdict for large damages, said that if experts differed so much as to the danger of a certain occupation, an ignorant workman could not be expected to know and should have been carefully warned.

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[1] Read before the American Academy of Medicine, Baltimore, May 6, 1895.

When this question of conflict between experts is discussed, it is usual to think only of medical experts, and in this meeting it will not be expected that any other class should be considered. There is, however, a much larger field, which, so far as I can judge from a limited experience, is more corrupt than that of medical testimony. Indeed, a noted English lawyer says in his autobiography, that he had found experts in engineering questions more difficult to deal with than any other class. " The inside of a bar of iron," he says, " is a terra incognita more abstruse than any organ of the human body." In the graver issues of jurisprudence in which only physicians are likely to be called, cases involving the forfeiture of life or restriction of liberty, the procedures take place in open courts and the very publicity is a protection against extravagance in statement or misrepresentation, but in the private hearings that are given in equity, especially cases involving the nature of patents or the value of real estate, expert testimony runs riot.

To illustrate the variety of opinions expressed by lawyers concerning expert testimony, I quote the following paragraph from a recent work, The Law and Medical Men, by a member of the Canadian bar:

" Some judges and writers have very little respect for the evidence and opinions of experts.' An Iowa judge says, ' Observation and experience teach that the evidence of experts is of the very lowest order, and of the most unsatisfactory kind.' One from Maine speaks of ' The vain babblings and oppositions of science so-called, which swell the record of the testimony of experts when the hopes of a party depend rather upon mystification than enlightenment.' An Illinois judge quotes a distinguished occupant of the bench as saying ' If there is any kind of testimony not only of no value but even worse than that it is in his judgment that of medical experts.' Lord Campbell said, ' Hardly any weight is to be given to the evidence of what are called scientific witnesses; they come with a bias on their minds to support the cause in which they are embarked.' Taylor says, ' Perhaps the testimony which least deserves credit with a jury is that of skilled witnesses. * * * Being zealous partisans, their belief becomes synonymous with faith as defined by the apostle, and it too often is but the substance of things hoped for, the evidence of things not seen.' On the other hand, Best says, 'It would not be easy to overrate the value of the evidence given in many difficult and delicate inquiries, not only by medical men and physiologists, but by learned and experienced persons in various branches of science, art and trade.' And many judges have spoken of the essential aid to courts and juries rendered by the opinion of the experienced, skillful and scientific witness who has a competent knowledge of the facts involved."

Since we cannot deny that foundation for grave criticism exists in our present methods of expert service it is proper to examine into the cause and possible cure.

The principal cause is, of course, money. While occasionally, professional or institutional rivalry may lead to antagonism, the temptation of high fees is a sure influence to secure a prostitution of talent and abilities. We cannot expect such temptation to be avoided until human nature undergoes much change and the consciences of men are more generally developed. We must therefore look to methods of reform in manner of securing and employing experts to ensure that the influence of the fee may be less potent.

The literature of this subject, as it appears in American journals and text books, inclines very strongly to a system of state experts analogous to that in vogue in some of the nations of continental Europe. Many of those who advocate such a system have but little knowledge and less experience of the details of this method, and a careful study of it in operation, might show serious defects, but it will be sufficient to consider the questions of the applicability of these methods to American practice.

In the first place it must be noted that the system of jurisprudence in vogue on the continent of Europe is materially different from that of England and the United States. The continental procedure is essentially that of the Romans, and has far less of that consideration for the right of the accused, which is so human a feature of English law.

Indeed, it has been tersely said that under the continental system a man is presumed to be guilty until he demonstrates his innocence. In actual criminal practice the defence depends largely upon the will of the court for its privileges of cross examination, and the judge often questions the accused at great length. Apart, however, from the great difference of judicial procedure, we must bear in mind the difference in systems of government. That political corruption both as to dishonesty and favoritism, exists in the best governments of Europe cannot be doubted, but it is certain that they are free from the extraordinary development of party politics as seen in this country. The civil service of England, France, and Germany is by no means perfect; it is not by long odds made up wholly of honest or able men, but there is at least not this continual feverish contest for spoils, and the selection of experts under government auspices can be kept in part out of the vortex of political life. In the United States, however, nothing that concerns public office can yet be kept wholly from politics. The high fees and professional distinction to be attained by service as state expert in criminal cases will be likely to develop the evil influences to a high degree. There are, moreover, difficult questions of detail to be considered by those who favor this system. All sciences are now divided into many specialties. While our specializing tendencies have not gone so far as to suggest the case of the man who had devoted his life to the study of the Greek definite article, and died lamenting that he had not confined himself to the dative case of it, yet proficiency in one department may coexist with superficial knowledge in closely related fields. Good all-around men, to use a rather colloquial expression, are becoming scarcer every day. It will, therefore, be no easy task for the appointing powers to select experts qualified to give evidence in the various cases that come before the courts; indeed, it is probable that if the system should come into vogue a board of experts would be required for each district. I doubt very much if the medical profession in its present condition could furnish a sufficient number of competent persons to meet the requirements of all the courts of the country.

I leave out of consideration many details which concern the mere machinery of system, such as tenure of office, compensation, method of appointment, extent of authority though these involve great difficulties in settlement.

Let us assume that some state has inaugurated a system of official experts, and by some happy chance has secured a board including several men of established honor and ability to whom all questions involving expert testimony are to be submitted. Let us further suppose that one of these experts has been duly consulted in the case of a prisoner on trial for murder for whom a defence of insanity is set up and whose lawyers have considerable money for defence. If the official report favors the theory of the defence, all may be well; but if the decision is against that theory, the contests between experts will not be set aside, for the Constitution of the United States, and of many states, guarantees the accused the right to be confronted by the witnesses against him and compulsory process for obtaining witnesses in his favor. Advantage will certainly be taken of this constitutional privilege and an array of experts produced to contradict the official report. The unseemly contests will not be avoided. To take away this right of contradiction by the defence would be to inaugurate a system of the most vicious character. A correct system of jurisprudence lies at the very foundation of happiness. The evils of the social life of the middle ages are often ascribed to bigotry and superstition, but, in reality, a large part of the wrong was wrought by an erroneous system of jurisprudence. Defects undoubtedly exist in the English and American methods, but they depend upon the nature of Anglo-Saxon liberty, and they exemplify the humane principle of our laws, that a prisoner is considered innocent until he is shown to be guilty, and that all doubt or error must be resolved in his favor.

Finding then, that apart from the crude manner in which the system of state experts is conceived, it will hardly accord with our methods of trial, we may consider whether there is any other way of increasing the efficiency and securing the ability and impartiality of experts.

Now a large part of such reform undoubtedly depends on advancing the force of honor and conscience in the individual and is scarcely to be considered here. The influence of example will be powerful for good, and it is to be hoped that a sentiment may be cultivated in the profession which will render it impossible for a man or woman to retain prominence in medical circles while basely selling talent in defence of wrong. It would be, however, a great injustice if lines should be so tightly drawn as to prohibit the utterance of facts, or of opinions based on facts. "Error of opinion may be tolerated when reason is left free to combat it." The vilest criminal, the basest swindler, the most corrupt merchant is entitled to have the facts set clearly forth, on the same principle that a physician treats a disease that is the result of vice as readily and as carefully as that which is due to the noblest self-sacrifice.

While systems of education cannot give honor or conscience where these do not exist, or strengthen them where feeble, it is not impossible for selective action to be exerted which will exclude some of the flagrantly unworthy. I look with some hope to the development of an elaborate system of instruction in medical expert work. At the present time medical colleges in the country are dabbling more or less in this line. All of them have courses on medical jurisprudence, but in many cases these courses are like the lithia in mineral waters, principally on the label; that is in the announcement or schedule. If we inquire to the instruction, we will find it either a brief lecture course, by auxiliary teachers at a nominal salary, or that it is attached to the department of some member of the faculty, who "runs in" a few lectures in the course of the winter. A professor of medical jurisprudence is an imposibility at the present day. The time was, no doubt, when one man could qualify himself to give opinions upon poisoning, infanticide, abortion, rape and wounds, but one small head cannot now carry all that is to be considered upon these topics and if a single expert is called on to serve in all fields, he will, if not protected by arbitrary exclusions of criticism, be discredited by counter-testimony. Some years ago I succeeded in introducing into the curriculum of a medical school a course in medical jurisprudence, based upon the principle that each department must be headed by experts. The time assigned by the course was short, but it was divided among the members of the teaching body "acocrding to the gifts which bounteous nature (and experience) did in them serve." The professor of obstetrics lectured on abortion and infanticide; the professor of surgery on wounds, and so on. The result was certainly satisfactory to the class, but unpopular with the faculty, and was abandoned. It is so much easier to elect some lecturer on medical jurisprudence, relinquish the small fee which each professor had received and worry no longer as to the instruction, especially since the original reason for introducing the course into the curriculum was to comply with the requirements of certain state boards. Such perfunctory work will not give the profession a body of experts qualified to do justice to the grave issues of medical jurisprudence. A year's course of lectures following upon a good medical training and embodying some elective branches will go far towards accomplishing reform. I have for years contended that the tendency to specialism should be recognized in our college work and I think that the fourth year of our present system offers an admirable opportunity to put this plan into operation. I suggest that the course of the medical school be so arranged that the education in general medicine and surgery be finished in three years, which can certainly be done if a good standard of admission is established, and that the work of the fourth year be optional as to various specialties. Among these could be included a course in medical jurisprudence and state medicine leading to a special degree, or at least a special certificate, and in time there will not only be at the command of the community experts in all the various fields of judicial inquiry, but in the cities where the necessity is, of course, greater, there will be the facilities for elaborate and impartial inquiry which a collegiate organization affords. Time will not permit me to treat this matter in more detail. I have simply recorded it as my view that medical experts should be systematically trained for their work.

I do not anticipate, however, that the highest possible development of college methods will remedy fully the evils which are associated with expert testimony. No college has ever shown a capacity to create conscience or morals. These are matters of individual organization. The temptation of professional distinction, public success, and high fees will always be capable of diverting men and women from the paths of truths and justice and we may expect under any system a continuance of those disgraceful exhibitions which have made medical experts a theme for the sarcastic wit of lawyers and newspapers and the more solemn denunciation of judges.[1]

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The claim of Dr. Keeley, and the syndicate representing him, that 90 or 95 per cent of cases of inebriety can be cured in a space of four weeks has not been substantiated by facts, and efforts to secure legislation making the employment of this treatment compulsory in State institutions, especially when we consider the fact that the nature of their remedies is kept secret, are as absurd as if the proprietors of any secret remedy should endeavor to compel the use of their nostrums in public hospitals.

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[1] From the current (April) number of the American Law Register and Review I quote the following notes which bear upon two important points in the topic under consideration.

"The Court of Appeals of New York has administered a deserved rebuke to the absurd lengths to which expert evidence is now carried, though in terms much milder than the case warranted. On the trial of the notorious Dr. Buchanan, for the murder of his wife, one of the jurors, while at dinner at a hotel, after the case had been submitted to the jury, was suddenly taken ill and fainted. Physicians, expert in mental diseases, examined the juror, and gave it as their opinion that he was not affected with epilepsy or paresis ; and that his symptoms resembled those of nervous exhaustion due to close confinement as a juror. The juror denied ever having suffered from epileptic attacks, and physicians who had known and attended him, testified that he had never manifested any symptoms of nervous disease. Yet other physicians were found, total strangers, who had no knowledge of the facts other than that gained from the statements of others, who dared testify that, in their opinion, the attack was of an epileptic character, and indicated a mental disturbance that must have existed for several hours and have rendered his opinion unreliable and useless. This testimony was very properly held not to show that the juror was mentally incapable of concurring in the verdict and, therefore, not good ground for setting it aside. This case, in common with many other recent ones, goes to show how utterly unreliable the testimony of the average expert is, especially when he has a pecuniary stake in the question at issue."

"The Supreme Court of Arkansas, following the weight of authority has recently held, that in the absence of express statutory authority, an expert who testifies for the state in a criminal case cannot demand extra compensation as an expert in addition to the usual witness fees, at least when he is not compelled to make any preliminary examination or preparation, and is not compelled to attend and listen to the testimony.

When no demand is made in advance for special compensation, an expert witness can recover only the statutory witness fees.'

THE TREATMENT OF INTERMITTENT FEVER.

By WALTER M. FLEMING, M.D,

New York.

Before the discovery of the tubercle bacillus, many a cough was allowed to continue without treatment and the real difficulty not suspected until a sharp hemorrhage or a hectic fever revealed the true situation. Only a few months ago diphtheria patients walked the streets with a simple sore throat, while cases of follicular tonsilitis were carefully treated as diphtheritic in character. Nearly all of us were taught that malaria was an earth-born poison which filled the air with "a fever-generating agent."

Now, all this is changed. The tubercle bacilli can be detected in the earliest stages of phthisis. The Klebs-Loefler bacillus decides the presence of diphtheria; and the malarial germs of Laveran tell us we have an intermittent fever.

It is natural that we look for a remedy which will destroy these germs or counteract their poisonous products. Indeed, it now appears that we have, unconsciously to be sure, been giving a perfect specific for the cause of the latter disease. Quinine is no longer administered in an empirical manner. We know precisely why we give it and what it does. Quinine exerts a deathly influence over the malarial germ, therefore it may be given with the satisfaction of knowing that it will invariably check the paroxysms of an intermittent fever. If its use is not followed by this cure, then it is certain that it never came in contact with the red corpuscles of the blood. Absorption was incomplete or the quantity of the drug was insufficient. In the light of all this it is certainly bordering on the ludicrous that the National Dispensatory should give a list of seventy-six remedies in the index under Intermittent Fever.

The patient has usually had a malarial paroxysm before seeking medical advice. As hepatic activity is necessary to obtain the best effect of the specific treatment, so, in cases of constipation at least, it is better to begin the treatment with the following prescription which should be taken five or six hours prior to the quinine:

℞ Hydrarg. Chloridi Mite.
Sodae Bi-carb., aa gr. I.
M.—Divide into six powders, take one powder every fifteen minutes, using all the powders.

This is far preferable to giving the calomel in one single dose and in larger quantity. However, it may be necessary, if the patient is insensitive to purgatives, to increase the quantity in the prescription by one-half. While this preparatory treatment is not necessary, yet it is certainly true that after its employment a less quantity of quinine is required and the general condition of the patient is improved.

It has been stated that this treatment should be given five or six hours before the specific treatment. It should now be said that the latter treatment is best inaugurated at such a time that it will be exerting its fullest physiological action when the next paroxysm is due. This time can be quite accurately stated when we remember that a paroxysm often begins an hour earlier than the preceding one and that about three hours are required for the quinine to be in its most active condition in the body.

To insure prompt and complete absorption the quinine is best given in liquid form. The following is a favorite prescription:

℞ Quinia Sulph., grs. xv.
Aquae, oz. j.
Acid Sulph., dil. q. s. ft. sol.
Mx. et. Sig.—Take at one dose in one-third glass of water.

With the above preparatory treatment and with the quinine dissolved, this dose is equivalent to at least twenty grains given after the usual manner; while it is certain we should nont trust to pills or capsules at such a time unless we know positively that these are in a perfectly soluble condition.

To prevent the uncomfortable head symptoms which accompany full doses of quinine and also to relieve the pain which is likely to be present at the same time of the expected paroxysm, the following prescription should be given four or five hours after the specific:

℞ Antikamnia Tablets (5 gr. each) No. xxiv (24).
Sig.—One tablet every two hours while pain necessitates.

While the above dose of quinine is sufficiently large for residents of most parts of the United States, yet in some of the Southern States and in other sections where malaria abounds with unusual force, it may be necessary to give the quinine as high as twenty, forty, or even sixty grains. But in the great majority of cases the above single dose will be sufficient to prevent a second chill.

In order that there may be no question about the recurrence of an attack, and also in order to bring the system under the influence of a goodtonic, the quinine should be continued for one or two weeks in doses of 5 to 10 grains a day. As the malarial germ has left its effects on the nervous system and often to a marked degree, so a remedy is indicated which will put at rest the disturbed condition. The following will be found satisfactory:

> ℞ Antikamnia and Quinine Tablets, 5 gr. each, No. xxiv.
> Sig.—One tablet three times a day after meals.

This tablet contains 2½ grs. Sulph. Quinine and 2½ grs. Antikamnia, being the most desirable proportion. If the physician be called while the patient is suffering from a paroxysm, and he is in doubt as to its nature, he has only to remember that any intermittent fever which resists the action of quinine is not necessarily of malarial origin. Even during the chill of a malarial attack the temperature may rise to 102° or higher, while it is often true that when the chill has passed and the fever is on, the thermometer will show a lower degree of heat. Therefore, no better treatment can be given at the beginning of or during the chill, than the following:

> ℞ Antikamnia Tablets, 5 gr. each, No. xxiv.
> Sig.—Take two tablets immediately. Repeat dose in two hours if pain necessitates.

The antikamnia will relieve the congestion of the abdominal and thoracic organs and will materially alleviate the headache of the second stage especially. In fact, it practically robs the fever of its most distressing features.

When we consider that the cause of intermittent fever is so thoroughly understood and that quinine is regarded as its specific, destroying said cause, how puerile are all attempts to bring forward new substitutes. Although pain may not be dependent upon any special living organism, yet it is certain that in antikamnia we have a most reliable specific.

In regard to the treatment of all forms of febrile maladies, periodic or continued, I have found the antikamnia tablets with its various combinations of codeine, salol or quinine (as indicated in each individual case), the most reliable, prompt and satisfactory remedies in controlling these intractable disorders of any remedial agent known to me in a general active practice of over thirty years.

TRANSLATION.

SOME OF THE ACCIDENTS OF VACCINATION.

Translated for Gaillard's Medical Journal,

By H. McS GAMBLE, Ph.D. M D.

Moorefield, W. Va.

Among the accidents of vaccination, must be placed in the front rank the different eruptions that may be produced consecutively to the inoculation of the virus.

These eruptions have been divided into two groups by Prof. Fournier."

The vaccinal eruptions of the first group, vaccinal eruptions properly speaking, are constituted by veritable vaccinal pustules developing outside of the points of insertion. This is the generalized vaccina so well described by Jeanselme, and of which we shall not speak, nothing new, having been published upon this point since the work of our confrere.

The vaccinal eruptions of the second group, upon which we wish to dwell, constitute what M. Hervieux calls the indirect eruptions. "They are," says M. Longet, "cutaneous affections or dermatoses, superinduced by vaccination, not being able to transmit the vaccine disease by the inoculation."

Jenner twice saw urticaria complicating cow pox. Pearson has described eruptions formed of large red and hard papulae, but slightly elevated and containing neither pus nor serosity. In 1801, Husson noted fugacious eruptions, accompanied by no malaise and not transmitted to children inoculated like those who had had them. In 1806, in the reports presented to the Academy of Medicine, are found six cases of vaccinal dermatoses, all of which, according to Dauehez, are related to miliaria. Dating from this moment, the eruptions secondary to vaccination have been reported nearly everywhere, and we can only refer, among the more recent works, to those of Hervieux, Dauehez, Behrend, Longet, Patoir, Waismann, etc.

I. Vaccinal Dermatoses.

In a general way the aspect of the vaccinal dermatoses is very variable. Sometimes they are simply erythematous, sometimes they are visicular, pustular, pemphigoid or eczematous.

They appear in full vaccinal evolution from the ninth to the eleventh day on an average.

Behrend makes the distinction of precocious eruptions and tardy eruptions; according to him, the former show themselves the second day after the vaccination, the latter after the eighteenth or nineteenth day.

It is almost always in the midst of perfect health and without appreciable elevation of temperature that the eruptions supervene. Sometimes, during the prodromic stage, children are agitated, capricious or suffer from insomnia; but these slight symptoms disappear as soon as the exanthem is developed.

The eruptions almost always possess but an ephemeral duration, and all authors have insisted upon their benign character. However, certain of them are tenacious, above all in the scrofulous; this is peculiarly the case in regard to eczema (Behrend).

The frequency of vaccinal dermatoses is very difficult to establish, for we often have to deal with fugacious eruptions which pass unnoticed. Almost always it is children who are attacked, and, in the opinion of Dauehez, the superactivity due to the entrance of the vaccine matter into an uncontaminated organism could not be called in question. The subjects attacked with a disease of the skin present an increased receptivity (Davergie et Besnier): finally it seems that the eruptions are of more frequent occurrence during the summer.

Dauehez has insisted upon the remarkable virulence of vaccine virus from the heifer, and has published, in support of his opinion, two observations in which a roseola is seen to develop itself in children refractory to other inoculations than those made with the virus from the heifer.

Contrary to this opinion, Hervieux, has proved before the Academy, that secondary vaccinal eruptions are diminishing in frequency since the introduction of bovine virus. At the Baudelocque clinic, all the newborn children are vaccinated directly with vaccine virus from the heifer. Mlle. Weismann has for eight months kept in view the children vaccinated at this clinic, and she has had no occasion to observe these eruptions under conditions such as to justify her in invoking solely "the remarkable virulence of the virus from the heifer" of which Dauehez speaks.

It is certain that individual predisposition plays an important role in the etiology of vaccinal dermatoses. Often, of several chidren vaccinated at the same time with the same lymph, a single one has an eruption, whilst the others remain intact. In one of the reports of Mlle. Weismann, a child 14 months old is seen to have a vaccinal eruption, whilst its two elder brothers, reared by the parents under the same hygienic conditions, presented no disorder in consequence of the vaccination.

On the other hand, scrofulous, rachitic children, are more subject to pemphigoid and purpuric eruptions, whilst among the subjects of herpes other forms of efflorescence will be observed. When a pemphizoid eruption shows itself in a child in good health, it is necessary, according to Weismann, always to inquire if there is not a syphilitic origin.

The pathogenesis of vaccinal dermatoses has been very much disputed. Longet is inclined to give a certain place in this pathogenesis to the nature of the vaccine virus, and Hervieux attributes the eruptions exclusively to the virus itself. Friedinger has maintained the same opinion and, according to his view, the dermatoses which we are discussing are as clearly dependent upon the vaccine virus as the exanthems of measles or of scarletina are dependent upon the specific contagium. Behrend combats absolutely the specificness of the eruptions; he insists upon their variability, the very variable date of their appearance and their resemblance to certain exanthems produced by medicines. In his opinion, the presence in a the blood of a substance foreign to its constitution, may entail the appearance of an acute dermatosis; he attributes therefore the vaccinal eruptions to the arrival in the blood of the vaccine virus for the precocious eruptions and of the pus of the contents of the pustules for the delayed eruptions. He attributes also a role to the irritability of the skin, to the diathesic and individual predispositions, and sometimes admits a nervous origin.

Malcolm Morris invokes a reflex irritation proceeding from the wound of inoculation for the precocious eruptions, whilst he attributes the tardy eruptions to the passage of the virus into the blood.

Finally, it is evident that one might have suggested to his mind an elimination of the virus through the skin, or the result of the action of this virus upon the nervous and vascular elements of the papules (T. Patoir). On the other hand, the constitutional dermatoses ought to be ranked in a special category; eczema and psoriasis, which are developed only in subjects predisposed to them.

"If it was necessary to be exclusive," says Weismann, "we should say that it is the bad ground upon which the vaccine matter is planted that is the cause of vaccinal dermatoses." For ourselves, whilst recognizing the great importance of the ground, we believe with Patoir, that the eruptions have a multiple pathogeny; sometimes it is a question of reflex dermatoses, sometimes of the action of the vaccine virus or of the microbes in the pus of the pustules, or of their soluble products that have passed into the general circulation, sometimes finally, of constitutional eruptions.

The diagnosis of vaccinal dermatoses is easy: "it is only necessary to think about them" (Weismann). One must, however, eliminate the eruptions of dentition, those caused by the administration of some medicine, etc., before admitting the existence of a vaccinal dermatosis.

The prognosis is favorable in almost all cases.

Let us now consider the peculiar character of each variety of eruption.

1. Vaccinal Rash.—Vaccinal rash or vaccinal roseola is the most frequent exanthem. Hervieux ranks it among the direct vaccinal eruptions, although it does not yield vaccinal papules by inoculation.

The roseola appears usually from the seventh to the eighth day, sometimes later. Some have said that they have seen it make its appearance as late as the eighteenth day. It is probable, according to Roger and Damaschino, that it was then a matter of simple coincidence.

The eruption, in typical cases, appears first on the arms, around the vaccinal pustules, then extends more or less; it may become general over the whole body. The termination takes place by resolution, without desquamation. The general phenomena are very slightly marked or there are none at all; sometimes there is a little fever, some gastric trouble. Among very young children, some have observed vomiting, diarrhœa and even nervous disorders. Longet describes four varieties of vaccinal rash. The erythematous rash is the most simple. Then follows the morbilliform or scarlatiniform rash. The latter appears around the postules in the form of red maculæ, of irregular contours, recalling those of measles. These maculæ, when they extend over the whole body, may become fused into patches leaving intervals of sound skin between them of greater or less size. The face is attacked after all the rest of the body, but the legs and the feet are generally spared.

Usually, this form of roseola lasts from two to three days, some times four to five. The spots fade, assume a rose tea tint, then yellowish, and finally disappeared.

Spots of a wine red color characterize the scarlatiniform rash, which lasts but a little while. According to Widal, vesicles are sometimes developed upon the spots.

Behrend has described a papulous rash under the name of exudative erythema. It is a polymorphous erythema extending to the whole body, with localization upon the dorsal aspect of the hands and feet.

Widal in a memoir that appeared in 1864, has published some observations of an eruption resembling syphilitic eruptions. From the tenth to the fifteenth day after inoculation rose colored spots showed themselves, becoming prominent afterwards and opening a sombre red tint, then vesicles were developed on the summit of the plaques. The spots appeared on the flanks and the chest, and thence extended to the abdomen and finally to the arms, neck and face. At other times the eruption was characterized by isolated, hard, salient tubercules, occupying especially the trunk, the buttocks, the arms and the region about the genital organs. The papules lasted some time and left in their place copper colored spots. All the patients recovered without any consecutive trouble and without special treatment, and nothing justified a suspicion of syphilis. In Longet's opinion the copper tint pertained to a hemorrhagic congestive state of the papulous erythema.

Finally, urticaria may also be produced. The fugacious nettle rash appears from the first to the fifth day after vaccination and disappears at the end of twenty-four hours.

Darier has seen the post-vaccinal dermatosis simulate pigmented erythema. From the tenth to the eleventh day after vaccination practised with bovine virus upon a child twenty-two months old, there developed around one of the pustules a red zone, squamous and infiltrated which increased in size and persisted; other placards appeared afterwards upon the limbs and upon the trunk. The placards were brownish rose, distinctly limited, infiltrated and indurated, with salient borders, squamous surface and strongly pruriginous.

For the moment exacerbations occurred, the placards became tumefied and rose up. Examination of a biopsied strip (lambeau biopsié) showed the lesions of an intense chronic dermatitis with vacuolization and acute eczematization upon certain points. It was a question then of a chronic eczema of the placards, a very rare form in the child. Probably there was a hint of a diathesis in control.

It is above all with measles that one may confound the vaccinal rash. But, in measles, there are the phenomena of catarrh, the fever is intense, etc. The general symptoms allow us to easily make the diagnosis from the variolous rash. Roseola caused by medicines will not often be recognized except by the investigation of the corroborative facts; naturally, the cessation of the use of the medicine will suffice to cause it to disappear.

Vaccinal roseola of papulous form presents some resemblance to syphilitic roseola. If the inoculation of the syphilis has happened at the same time as the vaccination, one has the corroborating facts, the ganglionary engorgements, the tardy appearance (9 septenaries at least) of the eruption to guide him. But, at other times, the vaccination may be followed by the appearance of a roseola belonging to an hereditary syphilis. One ought naturally, in these difficult cases, to carefully examine the parents, to ascertain if the child has not previously had a suspicious eruption. One will then rest upon the following diagnostic sign: the invasion of syphilitic roseola is accomplished slowly and it requires much more time to complete itself and above all to disappear, whilst vaccinal roseola is quickly formed and terminates at the latest in three weeks.

The treatment is very simple; it consists in the observance of cleanliness, baths of starch or of bran. If there is a little fever, a light diet, a mild purgative may be prescribed.

2. Vaccinal Miliaria.—Vaccinal miliaria, more frequent than is supposed (Weismann) often remains unnoticed, for it is usually very fugacious.

Voisin and Archiac have inoculated children with the fluid of the vesicules without producing any pustules. Chambon (Comm. orale à Mlle. Weismann) has obtained a negative result upon the heifer.

The eruption always exists in the neighborhood of the visico-postules of the vaccination. Sometimes it extends to the parts near by and even becomes general and confluent, so that it might be taken, as in a case reported by Dauehez for a various eruption.

The Miliaria shows itself from the eighth to the eighteenth day. The vesicules, which Hebra has compared to a dew drop, are the size of a grain of millet and are produced upon red spots; they contain at first a watery fluid which becomes afterwards thick and lactescend. The vesicules appear by successive eruptions upon the arms, the face, and the neck, and remain almost always separated from one another by intervals of erythematous skin. Quite frequently, agglomerations of vesicles are produced at certain points. The vesicles dry up in twenty-four hours and a slight disquamation then follows. Sometimes the eruption is accompanied by an intense pruritis.

One can hardly confound miliaria with the indurations of various sources. Yet some have expressed a belief in a variola, although the intense fever, the vomitings, the rachialgia that characterize this eruptive fever are always entirely wanting. It must be noted that the eruption may be distinctly papulo-vesiculous. In one of the cases reported by Mlle. Weismann, the child was the subject of a papulous eruption over the whole body, vesiculous on the abdomen and impetiginous on the face.

3. Pemphigus of Vaccination is a rare eruption which is seldom manifested except among weakly, scrofulous and rachitic children. Yet it may sometimes show itself exceptionally in children in good health (Weismann). Almost always sporadic, vaccinal pemphigus may become endemic (Hebra, Zehrer).

Ought this eruption to be associated with true pemphigus? Is it not rather a pemphizoid eruption re-entering into the hydrotoxidermies of Besnier and Doyon? It is probable.

Like ordinary pemphigus, vaccinal pemphigus is formed by phlyctenæ seated upon a very highly inflamed erythematous surface, the contents of which are transparent at first, then yellowish. The bullæ, easily torn, leave ulcerations that become covered with a blackish crust. The more frequently it is the vaccinal pustules which become at first phlyctenular; then, if the eruption progresses, it invades the vaccinated limb; finally, it may become general by successive eruptions, at the same time that some fever supervenes. In falling off, the crusts leave exposed a yellowish surface which resumes little by little the tone of the sound skin. The ulcerations may persist quite a long time in cachectic children and appear then upon the falling off of the cruts.

Confusion with syphilis is easy to avoid for the phlyctenæ appear in full vaccinal evolution, evolve themselves rapidly and are not accompanied by other disorders; naturally the search for corroborative facts remains negative.

The prognosis of vaccinal pemphigus is grave, for it indicates a bad soil, a profound organic wasting. Stokes and Hutchison have cited fatal cases of vaccinal pemphigus.

Quite frequently the dermatosis has been seen to manifest itself consecutively to the inoculation of a pemphizoid vaccine matter.

One must employ, against vaccinal pemphigus, local antiseptic measures and must build up the general health by all the means possible.

4. Vaccinal Eczema.—Vaccinal eczema occurs only in those predisposed to it, and the vaccination is, in these patients, but the abnormal cause of the development of the dermatosis.

The eczema appears around the vaccinal pustules and remains localized or extends more or less to the rest of the body.

It is a typical eczema, vesiculous and desquamative. Sometimes there occur successive outbreaks and then the eczema is prolonged, becomes very tenacious and may perpetuate itself in the scrofulous. The eczema is often associated, according to Mlle. Weismann, with impetigo and with ecthyma.

Except among the scrofulous, the prognosis is favorable. It will be well not to vaccinate children manifestly scrofulous until they are two or three days old; however, one will proceed in case of an epidemic or in large cities.

Some have also seen lichen and psoreasis appear after vaccination. The symptomatology of these dermatoses presents nothing peculiar.

5. Vaccinal Purpura.—Vaccinal purpura is rare and has received different names accordingly as it is more or less accentuated.

In the purpura of cow pox, very fine purpuric spots are observed, simulating to a degree to be mistaken for a series of needle punctures or flea bites.

The eruption is more accentuated in petechial vaccinia; the petechiæ are disseminated to some extent in every direction and the pustules are black and full of blood. Sometimes there are, at the same time, hemorrhages from the nose and from the ears.

A more pronounced degree of the same disease has been called ecchymotic vaccinia. Finally the gravest form has received the name of hemorrhogic vaccinia or of vaccinal purpura hemorrhagica. In a case reported by Berlureaux, we see that, on the fourth day after vaccinal inoculation, an intense fever with great malaise appeared. At the same time three ecchymotic patches were developed at the points of inoculation. The next day, these patches extend, unite with one another and form a black spot. Soon hæmaturid and epistaxis occur, petechiæ show themselves on the arms and thighs, the gums become fungous and the patient succumbs.

It is but seldom except in cachectic and hemphilic subjects that vaccinal purpura shows itself; however, the symptoms sometimes appear in a vigorous subject and in this case a secondary hemorrhogic infection should be acknowledged.

The treatment will be that of purpura.

Secondary Infections.

It is not our intention to speak here of all the secondary infections that may supervene consecutively to vaccination, so we will pass by vaccinal syphilis, so well described by Prof. Fournier, and the ulcerous vaccinia which M. Hervieux has described in all the details, to the Academy of Medicine, in 1889 apropos of the epidemic of la Motte-aux-Bois. We shall dwell only upon less known facts.

Impetigo is, as we know, a distinctly parasitic disease. It may appear in an epidemic form consecutively to vaccination. The epidemic of Rugen, the first in date, was reported in 1885. The impetigo struck not only the vaccinated children, but also subjects not inoculated, and even adults. The human lymph employed, came from the Royal Institute of Stettin ,and was furnished by healthy individuals; yet there were 75 sick out of 79 inoculated, and in all 342 sick with 8 deaths. The disease developed itself from the ninth to the eighteenth day; bullæ appeared around the vaccinal pustules, then soon upon other regions, chiefly the face; quite often there was adenitis.

Similar epidemics were observed at Vidou in 1885, in several districts in the circle of Clèves, at Eiswald. In all these cases it was vaccine matter of human origin that was concerned, and it may be admitted that there had been contamination of this matter, whether it had received germs derived from individuals attacked with impetigo, vaccinated in a common locality, or from sound individuals; the disease was afterwards transmitted chiefly by direct contagion (Layet).

In 1887, inoculations of animal lymph, derived from the institute of Dr. Protze, at Elberfeld, provoked impetiginous eruptions in districts sometimes very remote from each other. The calves were healthy. The disease was also propagated by direct contagion and there were five deaths. Bauselow and Koch found in the virus and in the bullæ of the impetigo a new micrococcus which, cultivated and injected under the skin produced bullæ.

According to Protze, in the epidemic of Elberfeld, they encountered herpes tonsurous, and the lymph contained the tricophyton. Why deny the existence of the microbe of herpes tonsurans and attribute this disease to a special parasite of the cow pox. This microbe was found in the water that had served to wash the field of inoculation; asepsy and antisepsy of the heifer supplying the virus would have served to prevent these troubles.

Ecthyma exists only under the sporadic form. It is besides quite rare; it occurs especially in debilitated children, and gives rise sometimes to tenacious ulcerations.

Can tuberculosis be inoculated by the vaccine virus?. Toussaint has published three positive experiments, and Besnier has reported a case of vaccinal lupus. But experiments and observations are debatable and researches have demonstrated that the virus obtained from the tuberculous do not contain the bacillus of tuberculosis; animals inoculated with the virus did not become tuberculous. Chauveaux and Tisserand have inoculated animals with cow pox mixed with blood of tuberculous animals and did not provoke the development of tuberculosis. In fact the age of the vacciniferous heifers is not that of the earliest stage of tuberculosis in such animals, and dermic inoculations of tuberculosis very rarely succeed, although Vernenil and Bisnier admit the development of cutaneous tuberculosis after superficial wounds; finally, there has never been published a clear case of vaccinal tuberculosis. The disease is, besides, very rare among calves (1 case of tuberculosis out of 22,320 animals killed at the slaughter house in Augsbourg, according to Adam; not a single case at Munich, out of 150,000 calves, according to Goldschmidt).

According to an observation of Gairdner, leprosy might be transmitted by vaccine virus.

Vaccinal erysipelas is a rare complication. Besides, Pfieffer remarks that the streptococcus hypogenus is very rarely encountered in vaccine virus. The erysiperals is precocious or tardy. Precocious erysipelas appears on the first or second day after the vaccination and is due to the simultaneous inoculation of the virus and of the streptococcus. It is from the seventh to the tenth day that the tardy erysipelas is developed which is due it may be to the lack of proper local attention, allowing a secondary contamination, or it may be to an inoculation with the lancet, if the subject serves as the source of the vaccine virus. If the erysipelas remains localized, it ordinarily gets well; it is not so if it becomes general, and its gravity, especially in young children, is then very great (mortality, 67.3 per cent. in ambulant erysipelas; 17.5 per cent. in localized erysipelas, according to Raudfauss). Veritable epidemics of erysipelas have been observed following vaccinations and re-vaccinations. Be this as it may, the disease is rarely fatal, for Th. Lotz has reported in Prussia but one death from erysipelas consecutive to vaccination, in 600,000 vaccinations performed in 1877. In England, according to Luge, statistics give only one death in more than 30,000 vaccinations.

There may be, in consequence of vaccination, abscesses, diffused phlegmous and sometimes even septicema symptoms followed by death. These complications caused by the use of a very much deteriorated vaccine virus, are easily divided with a little care. They assume sometimes an epidemic form (epidemics of San Quiran, d'Asprieres).

Sabrayés has seen a vaccination from arm to arm followed by an-osteo-myelitis of the right humerus, due to the staphylococcus pyogenes aureus.

Adenitis.—Suppurative adenitis and lymphongitis are somtimes the sequelæ of scratching and of lack of cleanliness.

Nephritis may be observed subsequent to vaccination. The following is a resume of a report made by Perl. Upon a child two and a half years old, and somewhat rachitic, three insertions of vaccine virus from the heifer were made upon each arm. Five days afterwards, the child became agitated, complained of pains in the abdomen and loins, and had fever. The punctures had all taken. At the same time the urine became red and contained 0.5 per cent. of albumen and hyaline casts. Under the influence of a lactated diet and rest in bed, all the phenomena rapidly became more favorable. The vaccine virus had passed through the usual stages of evolution. Falkeineim, in 187 nurselings, was unable to find any relation between vaccinia and albuminaria; he regards vaccinal nephritis as doubtful.

Can death result in consequence of vaccination? Independently of septicæmic complications or others? This seems possible. In point of fact, B. Ferrar has recently published an instance of death consecutive to vaccination in a child five months old, thin and small, but not in bad health. There had been four inoculations made with the virus from the heifer, and the other children vaccinated the same day, with the same virus, had no disorders. The pustules, in the case of the little girl, became covered with crusts, and when the crusts became detached there was noticed the presence of the ulcerations laying the muscles bare; the child became languishing, grew weak, and died seven weeks after the vaccination; the author attributes the fatal termination to "constitutional malaise produced by the virus, in the case of a badly developed and poorly nourished child."

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Condamin (Lyon Medical, November) believes that extra uterine pregnancy is almost the same cause of pelvic hæmatocele. The rupture of a tubal gestation cyst is far from invariably accompanied by the "cataclysms" and uncontrollable hemorrhage in which many authorities believe. Many such accidents have no symptoms, others give rise to small hæmatoceles, and only a few involve free loss of blood. Hemorrhages consecutive to ruptured tubal cysts in the first months of pregnancy cease spontaneously; operative measures are contraindicated at first, excepting when the rupture occurs after the fourth month, which Condamin believes is exceptional. The surgeon must wait till the collection of blood has become well encysted, and the anæmic patient stronger. The best operation then is vaginal puncture and incision, with or without removal of diseased appendages. Abdominal section should be rejected in the majority of cases as more serious and less efficacious, as involving prolonged treatment, and as inducing grave complications in the future. Condamin describes three cases where the vaginal treatment was successfully employed. In one a piece of placenta, in two the fœtus was removed with the clots; in all more or less of the involved appendage was removed.—Brit. Med. Jour.

SELECTIONS.

THE CARE OF THE INSANE AND THE TREATMENT AND PROGNOSIS OF INSANITY.

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The subjects mentioned as the title of this paper can only be briefly dwelt on in the time allowed. They will be dealt with in a general way, and in such a manner, it is hoped, as will be interesting, if not instructive, to the general practitioner. The subjects will be treated separately, as far as possible.

All civilized States or communities make some kind of provision for the care of their insane, usually in hospitals and asylums. These terms mean in America very much the same thing, the tendency being to use hospital in preference, for the reason that insanity is now universally believed to be a disease, and is to be treated by physicians, whether by drugs or other means. The old, and at one time common idea that an insane asylum was merely a place for the detention of persons who are dangerous or otherwise objectionable, to be at large, is fast giving way to the more modern belief that insanity requires, as other diseases, medical treatment.

The popular opinion that asylums are places of dark cells, of chains, of cruel and inhuman treatment, is slowly but surely giving way to the hospital idea, where the unfortunate inmates have the kindest attention and the best treatment. The former keeper is now an attendant, or, what is better, a nurse. Training schools for nurses are being established in most of the best hospitals; in short, everything is being done that can be to foster the idea that persons afflicted with the disease (insanity) ought to have, and do have, the most careful and skillful medical treatment.

Other modes for caring for the insane are in use, namely, private institutions, in colonies, the Scotch or boarding-out system, almshouses and jails, or outside of an asylum, technically called "single treatment."

A mere mention of these different modes of caring for the insane, except the last, will be sufficient to answer the purposes of this paper.

Private institutions were established to care for a certain class of patients, principally the wealthy, who wish to have better or more expensive apartments than State institutions furnish, or who, for a variety of reasons, do not desire to mix with the class who are sent to public hospitals. They are almost universally under the care of physicians.

The colony of Gheel, which may be taken as the type of all other colonies, has been known since the 17th century. "The legend of St. Dymphna attracted lunatics to Gheel from time immemorial with a view to care by miraculous agency. The lunatics who arrived in the colony were dependent on the church called in Flemish 'Zie ken kamer' (infirmary) and were present at the religious services which should deliver them from their malady through the intercession of the Virgin Mary. When the patients did not recover their reason after a lapse of nine weeks, they were often left with the inhabiatnts to wait for the next festival of St. Dymphna."

This custom seems to have been the origin of the system of family treatment which has continued at Gheel for several centuries. This system has undergone modifications since—the colony has been subjected to lunacy laws, principally the establishment of a hospital thirty-five or forty years ago. But long before this the lunatics were regarded as patients.

Persons who become greatly excited, or prove unmanageable in the families, or have grave inter-current maladies, are sent to the hospital.

The "boarding-out," or the Scotch system of caring for the insane was, as its name indicates, first established in Scotland. The Scotchman, with his usual thrift and yet humane spirit, undertook to care for the insane in a cheaper manner than in hospitals, which are so expensive to build. The law requires every lunatic to be sent to the proper asylum, unless his removal has been dispensed with by the General Board of Lunacy, who have charge of all these cases in Scotland. Such cases as, in the opinion of the Lunacy Board, do not require hospital treatment, are boarded out in private families. If any of these should become violent, or need hospital treatment, the Board orders his return to the hospital. The patients are visited four times a year (oftener in case of sickness) by the parochial medical officer and twice a year by an inspector of the poor.

This plan has been adopted by the Massachusetts law in 1885 and partially so by Wisconsin, perhaps at a later date. I know of no other State using this system.

Care for the insane in alms-houses is almost universally condemned, especially in such alms-houses as are common in our States. The system has nothing to recommend it except the lessened cost, which is conclusive evidence of improper care.

Jails are used for the temporary custody of dangerous lunatics awaiting proper commitment to the hospitals, which course, while objectionable, seems to be unavoidable in many instances. It is to our credit in North Carolina that nothing but necessity compels it. In the Western Hospital district I know of but one case confined in jail, and that is a criminal case.

Home care, or the treatment of single patients outside of an institution, is for the general practitioner the only practical point under this head of the subject. What cases should be treated at home, or outside of an asylum, is oftentimes a very perplexing question, and it may be added, a very important one, for, rightly or wrongly, there is a stigma attached to a person who has been an inmate of an asylum. That this odium is rapidly on the decline is true, but as long as such an opinion does exist, it is clearly our duty as physicians to save our patients from it if possible. It is, of course, proper to consider the damage likely to occur by such a step, and act accordingly. Young men and women often have their lives blighted and their future prospects injured by being sent to an asylum when they might have been restored by "single treatment."

Many young mothers break down in their first confinement and rapidly recover if properly treated. We will surely confer a great blessing on them if they can be relieved outside of an institution.

To properly arrive at the answer to the question, What cases can be treated as "single patients," I will first attempt to show those whom we cannot hope to care for at home—in other words, make our diagnosis by exclusion. It will be found that the number to whom we are able to give "single treatment" is exceedingly limited.

In our own State one of the first difficulties that, in the vast majority of cases confronts us, is the want of sufficient money to give our patients such care and treatment as he needs, for we will find that single treatment means traveling, in some cases, with an attendant; and even at home the most assiduous watching by the physician and nurses. Few of our people are able to bear this expense, even if the patient has everything else in his favor for private treatment. It is plain that dangerous homicidal or suicidal persons need sequestration, that noisy and destructive ones—those disposed to burn, to steal or commit depredations of any kind, must be restrained. Acute mania, delirious melancholia and even melancholia of less acute form, does better when sent to an asylum: indeed, a cure is hardly to be expected outside of one. General paralytics, because of their tendency to steal and to squander their means, require sequestration.

Persons who have hallucinations of hearing are always dangerous. "The mystics, besides their practices of fasting, asceticism and self-inflicted violence, even to the extent of more or less serious mutilations, often attempt the lives of others in obedience to the sense of duty that inspires them. Those persons who believe they have received from heaven missions to destroy great or prominent persons, others with the view of pleasing God by sacrificing children in imitation of Abraham, still others who have delusions that they are persecuted, those suffering with subacute mania, with acute and subacute alcoholic insanity, those with delusions of grandeur, paranoiacs (primary delusional insanity), all these should be confined.

There are many patients whom we cannot pronounce dangerous, but who seem unable to exercise self-control enough to recover outside of an asylum. The following case will fully illustrate this class of cases: A short time ago a gentleman visited me with his medical adviser with a view to putting himself in the hospital. He was a shrewd business man, one who had accumulated considerable property by thrift and enterprise. He had formerly been in an asylum, where he remained a short time.

The only thing wrong with him was his extreme restlessness and a desire to drink and spend money foolishly. It was not very plain the gentleman was insane. We finally agreed that he would put himself under my treatment and remain in Morganton, and that I would furnish him a nurse. The patient, after various efforts to exercise self-control, finally told his physician that it was impossible for him to recover unless put under restraint, as he realized that he was insane and needed hospital treatment. And the patient was right.

There is still another class, it seems to me, that requires sequestration, and that is composed of young women whose minds are weak, either from disease or congenital defect, and who show no disposition to injure themselves or others. They are a menace to society by becoming the victims of the brutal lusts of vicious men and breeding illegitimate defectives, to say nothing of the mortification and disgrace to their families and friends.

Dr. E. Regis, in his work, "Practical Manual of Mental Medicine," says: "In every case of acute derangement, especially an attack of mania or melancholia, that is of a curable form, isolation should be practiced as early as possible, because it has been irrefutably demonstrated by experience and proven that insanity has not only ten times less chance of recovery at home than in a special establishment, but also that an attack of insanity not specially treated, but left to itself in an asylum, recovers more quickly than would the same case treated and watched outside of an institution."

After thinking over the matter and reading on this special subject, I find only a very few acute cases that can properly or safely receive "single treatment."

Acute primary dementia is a form of insanity which resembles nearly the popular idea of idiocy, and is not preceded by either mania or melancholia, the latter being called secondary or terminal dementia. Acute primary dementia in the young may be successfully and safely left at home, as nothing is required except the mere attending to the bodily functions. As already indicated, some forms of puerperal mania may be treated at home, and so mania transitoria and delirium tremens and a form of mania following epilepsy.

In addition to forms of insanity mentioned which are acute, there are some chronic cases which may remain at home. All of you know many such who are simply called eccentric or peculiar. They often do not require any medical attention. The family or friends being acquainted with their peculiarities, soon learn to manage them. After all, it is simply impossible to indicate further what forms may be treated without isolation. It must be left to the individual judgment of the physician in each case. In acute cases, where there is no apparent danger in trying one at home for a while, a sufficient trial may be given before deciding to send to a hospital.

Treatment.—"In no other disease," says Maudsley, "are the difficulties of treatment so great as they are in mental disease, the intrinsic difficulties appertaining to the nature of obscure disease are increased and multiplied by the social prejudices concerning it; by the frequent concealments and misrepresentations on the part of friends who often may be reckoned on to mislead, rather than enlighten, the physician; by the necessity of removing the patient—probably against his will—from the care of his relations to other care more suited to his malady; by the unsatisfactory character and position of the institutions for the reception of insane persons; and, in some measure, also, by the necessary stringency of lunacy legislation." In the face of such difficulties one may sympathize with Casaubon when he says: "Let others admire witches and magicians as much as they will, who, by their art, can bring their lost precious things and jewels; I honor and admire a good physician much more who can, as God's instrument, by his knowledge of nature, bring a man to his right wits again when he has lost them."

The treatment of insanity naturally divides itself into general, which includes moral, hygienic, medicinal, etc., though in practice they are intimately connected.

Rest in bed as treatment has not until of recent years been so universally used. Of course, in cases weakened by disease, it was a necessity. I refer only to those cases physically able to be up. This treatment, as is sometimes the case, was first brought forcibly to my attention by what seemed to have been an accident. Just ten years ago a lady was committed to the State Hospital suffering wih sub-acute mania, with an element of religious and sexual excitement mixed with the usual symptoms of the disease. She was restless and nervous, much broken in health and with poor appetite. She, in the course of time, began to expose her person when a man was in her presence. One day when she was making an exhibition of herself in this manner the nurse was instructed to put the patient in her room, meaning only until I had left the ward. I was called off that day and was gone for several weeks. The patient in the meantime, having been kept in bed, I was surprised to find her on my return very much improved, better, in fact, than it was thought she would ever be. Since then I have found it useful in other forms, principally melancholia. This treatment has been long in vogue among neurologists, and I believe largely practiced in homeopathic hospitals. It is nearly always worthy of trial in these forms of insanity.

Occupation, Exercise and Amusement.—The first aphorism dinned into my ears as a rather lazy boy was, "An idle brain is the devil's work-shop." This is preeminently true with the insane. No effort ought to be spared to encourage them to work, and, far better, to have some useful employment; if not useful, then employment of some kind. I have known patients to be improved by giving them rags to tear, indeed, almost anything on which to expend their surplus energies except destructiveness. For the men there is nothing better than the ordinary labor on a farm. They may be usefully employed in the shops, at the barn, and, in fact, at any work they may fancy. I have established a special shop for them, where brooms, baskets, mattresses, etc., can be made. For the women, the usual household work, sewing, knitting, spinning, together with work in the laundry and kitchen, is used. I believe that perhaps their work might be enlarged by employment in the garden, the poultry yard and such other out-door work as they are accustomed to do at home.

Patients are induced to work by granting them certain privileges and appealing to their reason, but principally with us it is done by giving those who work tobacco. Failing to get patients to occupy themselves, they should take out-door exercise—at all events, to be in the open air. There are a class of persons, such as professional men unaccustomed to manual labor, who will not work; for them we try to find pleasant amusements, billiards, ten-pins and amateur theatricals. Dancing with us is more universally enjoyed than any other amusement. The object in all this is to get the patient's attention away from his morbid fancies and to divert his mind into healthy channels. Various other methods are used, but the object and results are the same, whether it is by schools, by lectures, by stereopticon exhibitions, by corn-shuckings or what-not.

Seclusion and Mechanical Restraint.—It is sometimes necessary to seclude a refractory patient. All agree to this. Mechanical restraint is sometimes used to prevent injury to others, but of late years it is not used in many institutions except for surgical purposes and to prevent self-mutilation or suicide. The form of mechanical restraint usually employed is the camisole or strait-jacket. Tuke, in his Dictionary of Psychological Medicine, lays stress on what he calls "Appeals to reason." "It has been laid down," says he, "over and over again, that it is no use to argue an insane man out of his delusions." "As a general rule," he goes on to say, "this is no doubt true, but it may be too broadly stated and too invariably acted on." He holds, and he is right, that, while this rule may be applicable at one stage and be no longer useful at another, it is well not to agree with one in his delusion, and yet not too strenuously to deny it. It is a matter of judgment when it is wise to show the patient that he is laboring under a delusion. I believe it is a good rule never to directly admit to the patient that his delusions are true.

The hygienic treatment of insanity includes the usual sanitary regulations in regard to clothing, habitation, food, sleep, etc. There is nothing special in this. The patients should have a sufficient quantity of good, plain, well-prepared food, his clothing should be ample and free, his quarters well ventilated and clean. Untidy patients should be bathed in warm water as often as they become soiled. The best bed for them is a cotton pad, under which should be a rubber or oiled sheet to protect the mattress. In a certain class of lunatics there is a great danger of bed-sores. It is not always possible to prevent them, but care should be taken to bathe the parts likely to break down with alcohol or alum-water. Equal parts of castor-oil and balsam of copaiba is one of the best remedies with which to treat the sore.

Hypnotism has been tried in the treatment of insanity, but so far with negative results. Suggestions during the waking state I have occasionally found useful. For a long time I used it only to prevent one patient making an assault on another; but of late I have used it to prevent other insane acts with some good results.

Medicinal Treatment.—"The special medicinal treatment of mental disease," says Maudsley, "lies within small compass. No physic in the world can touch an insane vanity or suspicion, or pluck from the memory a rooted sorrow, or raze out the written troubles of the brain If this is to be done, it must be done by the gradual operation of sound moral hygiene and the healing effect of time."

It is plain to every physician that when the system is broken down it should be built up, whatever the disease. In the drug treatment of insanity a large part of it is tonic, and for this I know nothing better than nux vomica and iron. Alcoholic stimulants should be used in the exhaustion of acute, or even chronic, mania and melancholia, and, as in general practice, in the old and feeble. Opium should be prescribed with great caution. It is of advantage in melancholia of the climacteric and sometimes in puerperal mania. Morphine combined with Indian hemp is a valuable hypnotic when other means have failed. Paraldehyde is one of the best hypnotics in the sleeplessness of acute mental disease, and, moreover, it is comparatively a safe remedy. Indian hemp is useful in many cases combined with chloral and bromide of potash. The bromides are beneficial at times with patients who can partially control themselves or are on the eve of an attack. Chloral I consider a rather dangerous agent in the treatment of insanity, and it is dangerous to life, and more dangerous to reason. I am yet to see a lunatic recover while taking chloral, even in moderate doses. It has well been called "crystallized hell."

Dr. Babcock, Superintendent of the South Carolina Asylum, told me that the first year or two he served as assistant physician at the McLean Asylum, near Boston, chloral was largely used in that institution, and it was a notoriously noisy place. Afterwards its use was discontinued, with an almost immediate cessation of noise and other disturbances.

Some months ago I was visiting an asylum, when a gentleman living near the institution called to see the Superintendent on business. In the course of the conversation he said: "Doctor, what have you done to quiet your patients? I have heard no noise for several months, and before that time I heard noises night and day."

The doctor did not give him any definite reply, but my curiosity was excited, and I began to interrogate. I found that, whereas chloral had been largely used, for the length of time the visitor had noticed the cessation of noise the use of the drug had been discontinued.

Hyoscyamus is useful very often in quieting restless patients, and used for this purpose it is valuable. The active principle, hyoscine, is one of the best hypnotics. In sleeplessness of old and feeble persons, or, indeed, in any feeble patient, nothing is better than a glass of hot milk or milk and mush at bed time.

In masturbation, belladonna and cod-liver oil are sometimes effective. Cathartics are especially useful in melancholia, where there is apt to be constipation, and also in chronic mania. I have seen a threatened attack of mania cut short by a brisk saline cathartic. I have had only a limited experience with electricity in the treatment of insanity. Those who have tried it do not speak highly of it, though I have no doubt it may be useful in some cases.

Blood-letting has fallen into disuse; it may be that it is too little used, and the same may be said of revulsion. A seton in the back of the neck is the best form of revulsion.

Massage and the Swedish movement cure are useful in certain forms of dementia or melancholia, where we find it impossible to make the patient take exercise. A mattock, or pick, or a wheel-barrow are better than the most accomplished masseur or the most expensive Swedish movement cure apparatus.

It has long been known that a sharp attack of some inter-current bodily disease has sometimes a markedly beneficial effect in chronic cases of insanity. Some recent writer has suggested the possible advantage of the subcutaneous injection of some toxine in the treatment of old cases. The psychiatrist, you will observe, does not wish to be left behind in the mad rush for toxine cures.

Esquirol calls the insane asylum the great therapeutic agent in insanity. "The treatment of insanity," says a recent writer, "cannot stop with the discovery of the physical lesion, which is the disease, in fact, and the proper application of remedial agents to it, but must have in mind, and must attempt to correct, the disorder in conduct that is a large part of its symptomatology. In by far the larger number of cases this conduct disturbance leads to injury, in greater or less degree, of the patient, and necessitates, for this reason, the intervention of other control than the volition of the individual affected. Experience has demonstrated that in private families this control can seldom be advantageously provided. We need not stop here to discuss the reasons for this. Whatever theories may be advanced, practice will determine that individual private treatment for the general classes of the insane, acute or chronic, is neither practicable nor advantageous. The feature of the disease that makes this true is the lesion of judgment and the defect in reasoning power, which prevents the individual from being able to judge correctly as to his own best interests. The restraint of conduct is, therefore, in most instances, a forcible one, and in antagonism to the wishes of the patient. Its enforcement must, more or less, irritate him and put him in antagonism to the agency enforcing the control. Where this is individual entirely, as it must be in a private home, it is more decidedly irritating than in an institution where architectural and institution arrangement largely supplant the individual control of the home. Complete change in environment such as institutional treatment affords, is often a wonderful regulator of conduct. The surprise or shock from the great contrast with home life takes the mental activity, the main-spring of action, out of the morbid channel in which it has run at home, starts up new lines and fills up the old ruts."

The best work the hospitals for the insane do is not the number of patients sent away cured. When the curative stage is passed, our best skill is called into requisition. We must then begin the hardest of all our works to call up in our patients the remnant of self-control that may be left, and to make them as happy and useful as is possible. The best hospitals are those which have the most quiet and orderly patients—which means the happiest and most useful.

Prognosis.—"The prognosis as regards life depends more upon the existence of other bodily diseases than on the condition of the brain affection. Certain forms of insanity are characterized by immediate inflammation of the cortex. Of these the most dangerous is dementia paralytica (general paresis), which proves fatal in one to three years. An unfavorable prognosis attaches to the conditions of excitement which are due to severe congestion of the brain. Persistent motor restlessness and insomnia increase the danger of sudden collapse, and rapid œdema of the brain may develop under such circumstances. The more violent the cause and the more recent the disease, the greater is the danger to life; as a matter of course old and feeble persons succumb most readily." (Kirchhoff.) "Prognosis as regards recovery from insanity requires much greater psychiatric knowledge."

In considering the latter prognosis, i. e., prognosis as to recovery from insanity, the curability of insanity will be included, in a general way, later on.

Acute mania and melancholia are favorable in persons under forty years of age without a strong heredity. Persons with fixed delusions, or hallucinations of hearing or smell, or with periodical attacks with long, free intervals, are unfavorable to complete recovery. A case slow in developing the disease is unfavorable, so are quick or sudden apparent recoveries. Improvement in physical health coincident with mental improvement is favorable, while, on the other hand, improvement in bodily condition without any corresponding mental change is one of the worst indications. Post-febrile insanity, unless due to anæmia, is unfavorable, so also syphilitic and epileptic insanity. Insensibility to pain, to heat or cold, staring into the bright sunlight, absence of the feeling of satiety, the ingestion of nauseous articles, especially of excrement, are found almost invariably to mark unfavorable cases. When the individual begins to admit that he "has been wrong," as he usually expresses it, a recovery may confidently be expected; the same may be said of those in whom there is a return of the natural affections and tastes. This covers nearly all "the rule of thumb" prognoses common in asylums and will suffice for this paper.

Dr. John Thurman traced the history of 244 cases treated at the York Retreat, England, and, in generalizing from these data, formulated the following rule: "In round numbers, of ten persons attacked by insanity, five recover and five die, sooner or later, during the attack. Of the five who recover, not more than two remain well during the rest of their lives; the other three sustain subsequent attacks, during which at least two of them die." The York Retreat was founded early in the eighteenth century by the Society of Friends. Being patronized almost exclusively by this sect, the subsequent history of each case was known. This rule has become classic. The recent results of treatment in the York Institution show that the rule formulated a century ago is practically unchanged now.

The curability of insanity, as shown by hospital reports, will now be considered.

The late Dr. Pliny Earle read a paper before the American Medical Psychological Association, in 1885, on the curability of insanity, which seemed to show that fewer cases recover now than did forty or fifty years ago, and to prove this, took the statistics from twenty American asylums during three periods of five years each. During the first quinquenniad there was 46.08 p. c., during the second recoveries were 34.26 p. c., and during the third the recoveries were 29.91 p. c. I took the results of the same institutions for a fourth period, from 1885 to 1890, which shows the recoveries for this period to have been 27.48 p. c.

These statistics show a steady decline from the first to the second period of 11.82 p. c., from the second to the third of 4.35 p. c., from the third to the fourth of 2.43 p. c. While the decline in recoveries is steady, the decline grows less and less. We will hope that it has at last struck rock-bottom, and that hereafter the recoveries in asylums will not fall below 27 p. c. And the next statistics I will present to you seem to show this.

Dr. Earle took the results of 58 institutions for 1884; these show 27.88 p. c. of recoveries. The same institutions for 1894 show 27.51

p. c. It is proper to state that the percentage of recoveries is taken, not on the whole number treated, but on admission, which is the only way to arrive at the correct results.

The 58 hospitals represent the whole United States. The result by sections, as shown by the Doctor, was as follows: In the New England States the proportion of recoveries was 24.92 p. c., the Middle States 21.42 p. c., the Southern States 34.27 p. c. and the Western States 29.81 p. c. The largest number of recoveries was in the Southern States and the smallest number in the Middle States. For the year 1894 the result by sections shows 19.78 p. c. of recoveries in the Eastern States, 26.89 p. c. in the Middle States, 36.08 p. c. in the Southern States, and 26.06 in the Western States—the Southern States still showing the largest number of recoveries, and in this instance the Eastern States the smallest.

When I come to analyze these statistics, I am at a loss how to proceed. It is claimed by many, and I see no reason to doubt their statements, that now psychiatrists are more particular than formerly, and many patients, who, forty years ago, were discharged as recovered, are now discharged as improved, or kept in the hospitals as chronic and incurable cases. And yet this accounts for only part of the facts. The old men claim there has been a change in the type of the disease, that there is more melancholy, more general paresis and other forms of incurable insanity caused by fast living, and the sharp contests for existence. Whatever may be the reason, you have the results before you, as shown by the hospital statistics.

Death-rate.—Unfortunately, I can give you the death-rate for one year only, and that is in the 58 asylums whose percentage of recoveries I have just stated. The average death-rate on the whole number treated in these institutions for the last year was 7.2 p. c. Taken by sections, as we did the percentage of recoveries, it was 8.1 p. c. in the Eastern States, 6.7 p. c. in the Middle States, 7.4 p. c. in the Southern States and 6.8 p. c. in the Western States. The smallest death-rate was in the Middle States and the largest in the Eastern States.

I am well aware that it is not fair to limit our inquiries to one year, that there are many influences, both favorable and unfavorable, which may, and do, modify the results if only one year is taken, but these influences are probably balanced by taking a large number of institutions. We may therefore consider that the average annual recoveries of the insane in American institutions is 27 p. c., and that the death-rate is 7.2 per cent.

It may not be uninteresting to you to know the results of treatment in the State Hospital at Morganton for the twelve years of its existence.

At the end of the last fiscal year, November 30, 1894, 1,642 cases of insanity had been admitted; of this number, 642, or 39.1 p. c., had been discharged as recovered, and 213 died, or an average annual death-rate of 4.6 p. c. When writing this paper I did not have the data to prepare the statistics of our two other State institutions, nor the time to procure them.

In conclusion, let me thank you for the courtesy of your attention to a paper treating in so cursory a manner such a broad subject. My object has been to direct your attention again to the whole subject, that the special aspects may be before you for further study, should it suit you.

Apart from its interest to you as physicians, it is of vast importance to each one as a citizen of the State. The State expends each year a third of its yearly general revenue for the support of its institutions for this class, and it is impossible to estimate how much is spent by individuals and families in a way not to be collated in statistical estimates; and finally, in the broad field of philanthropy into which the profession of medicine puts each one of us, it is our duty to study out the wisest course for the care of this class of dependents.

If this effort of mine shall lead any to a clearer understanding of a single feature of the subject, or ameliorate the condition of one defective, I shall be repaid for my labor, and will plead this as an excuse for so long trespassing on your valuable time.—North Carolina Medical Journal.

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Northrup (Archives of Pediatrics) has reported two cases of myxedema in children, one in a girl nine years old, and the other in a boy twelve years old. In the first the symptoms appeared at the age of nine months, and from this period the child had scarcely developed, not only mentally but physically as well. Both were treated with a glycerin extract of sheep's thyroid, of which one dram represented one gland from a young animal. One minim of this was administered three times a day, the dose being increased one minim every second day until the temperature rose, the attempt being made to keep the temperature at a point just below 100°. In the first case the treatment was continued for eighty days, and was attended with diminution in the size of the tongue, improved expression of the countenance, ability to take more and varied food, and the acquisition of two teeth. In the second case the treatment was pursued for seventy-six days, and the improvement was more noteworthy.

HYGIENE.

Period of Isolation.

In the course of a report on contagious diseases Dr. Oliver advises the following periods of isolation:

For scarlatina, variola, varioloid and diphtheria, the period of isolation, before the child is allowed to return to school, should be forty days, counting from the first day of invasion.

For measles and varicella, sixteen days will be sufficient.

For pertussis, isolation should be prolonged to three weeks after complete cessation of the characteristic kinks.

For mumps, ten days after the disappearance of the local symptoms.

Nasal, buccal and pharyngeal irrigations with antiseptic solutions should be employed, and soap bath and rubbing of the entire surface and scalp should be a necessary preparation before returning to school. —Jour. Med. Sci.

The Prevention of Consumption.

Dr. B. W. Richardson in a late issue of the Asclepiad, affirms that the following rules if intelligently observed will benefit those predisposed to pulmonary tuberculosis:

Rule 1.—Pure air for breathing is the first rule for the prevention of consumption.

Rule 2.—Active exercise, outdoor as much as possible, is also essential.

Rule 3.—Uniform climate is also important.

Rule 4.—The dress should sustain uniform warmth.

Rule 5.—The hours of rest should be carefully regulated.

Rule 6.—Outdoor occupation is preventive.

Rule 7.—Amusements should favor muscular development and sustain healthy respiration.

Rule 8.—Cleanliness in the broadest sense is of special moment.

Rule 9.—Every precaution should be taken to avoid colds.

Rule 10.—The diet of consumptive people should be ample, with full proporion of the respiratory foods.

The Communion Cup.

Having already expressed ourselves on the question of the danger of the communion cup, we now simply desire to call attention to an editorial in the Christian Advocate, of New York. While the editor, Dr. J. M. Buckley, is widely known for his extensive collateral reading, yet he is especially well posted on medical topics. Dr. Buckley shows that this whole agitation rests upon the fact that owing to the general introduction of the germ theory it is easy to theorize how there might be such a danger as these alarmists portray. Dr. Bell, of the Sanitarium, is quoted as having made an investigation of this question for over twenty years, collecting and analyzing evidence, etc., and he is satisfied that the evidence is wholly negative. Extensive inquiries have been made of missionaries to thoroughly examine into this question, but here also there was no evidence in favor of the danger. Dr. Buckley shows, in a very skillful manner, the entire freedom from danger of tuberculosis, or typhoid fever; while the danger from scarlet fever, diphtheria, and measles would be as great when the persons were in their seats, as when they partook from a common cup; and also that the probability of such persons being in church would certainly be no greater than the probability of being killed while traveling on the cars, and yet who remains at home for that reason?
danger from cancer, he says:

Phthisical Patients in Colorado.

Hall states in the Colorado Climatologist that there is a crying necessity of again calling the attention of the profession to the error of stating to a patient with tuberculosis that he has merely a little "bronchial trouble," and that he will recover in a few months in Colorado. It is an exceedingly disagreeable task, no doubt, to tell a patient that he has consumption,—much harder than to apply, in a general way, the term "bronchial trouble," which, like rheumatism, covers a multitude of pathological conditions. But the physician who does this thing does injustice to three parties: first, to himself, as the patient, sooner or later learning the truth, is likely to feel that his family physician either failed to make a correct diagnosis or acted dishonestly; secondly, to the patient, who, believing that the matter is of little moment, fails to take promptly those measures which should always be resorted to in the face of so serious a disease; thirdly, to the physician in Colorado, who, new in the patient's confidence, is at times unable to overcome the idea of the patient, derived from his family physician, that he has only a little catarrh, which will disappear in a few weeks, whether treated or not, possibly, in this climate.

If the patient had been told in the beginning that he had a serious disease, he would have taken more kindly to the advice given him here, and also decided to remain as long as necessary with a much better grace.

Many of these patients return to the East after a few months, to break down again, and returning, often fail to regain what has been thrown away so lightly. Many lives are sacrificed annually because of such mistakes—Thera. Gazette.

Milk and Typhoid Fever.

The present epidemic of typhoid fever in Stamford, Conn., due to infected milk, is another strikingly corroborative demonstration of the value of careful examination into the relations of cause and effect in suspicious cases. The truth of this has been proved so often, especially in regard to milk-supply in its relations to the spread of the fever in given localities, that there is no doubt of its impressive vindication. While the history of the typhoid epidemic of Montclair, N. J., is still fresh in our minds, we find a repetition of parallel experiences, based on the investigations of the Stamford health officer. In both instances the milk-supply was traced to one source of infection. One milkman is seemingly accountable for all the damage done. Health Officer Hexamer, as soon as the fever assumed an epidemic form, instituted a system of inspection which promptly cleared up an apparent mystery and confirmed well-grounded apprehensions.

He marked on a map of Stamford, in red ink, the infected houses, and in black ink the routes of the milk dealers. In all but five cases the infected houses were on the streets supplied by one milkman. Dr. E. Smith, of New Haven, were summoned to Stamford by Dr. C. A. Lindsley, secretary of the State Board of Health, and Dr. Herbert Hexamer.

It was found that the milkman's barns were in the rear of his lot, and surrounded on all sides by dwellings and outbuildings. His tank for cooling milk was in the northwestern corner of a barn. This was fed by a pump drawing water from a well 12½ feet deep and filled with water to within 1½ foot of the surface. West of the pump were two outhouses, one 20 feet and the other 15 feet, each above the level of the bottom of the well. The slope of the land was toward the east, and the drainage from the outhouses led directly toward the pump. The ground was clay, covered with gravel, with surface soil above.

The well-water was examined by Dr. T. Mitchell Prudden, of this city, and found to be swarming with bacteria. Water taken from two wells to the west of that water-supply and one to the south were found to be contaminated, and the wells were ordered to be closed. It is believed that the typhoid germs were first brought to this neighborhood by the Italians in the employ of a railroad. During the past few weeks they have been at work in the section of the town in which the milkman's dairy is situated. There has been sickness among them, and the disease can be traced almost directly to their camp.

Dr. Hexamer, in an elaborate report on the subject, very properly recommends that a milk inspector be added to the Health Department. Indeed such an official should be connected with every health board in the country.—Record.

Death Rates and Race.—I will not weary you with further details of figures, which those of you who are specially interested in the subject will find in the reports of the vital statistics of the eleventh United States census, but will merely say that the corresponding data from Boston, Philadelphia, Baltimore, Washington, and from the New England States as a whole, taken with those from New York State and New York City and with those derived from a special investigation of over 10,000 Jewish families, including over 50,000 persons, lead to the following conclusions as being probable for the United States:

1. The colored race is shorter-lived than the white and has a very high infantile death-rate; it is specially liable to tuberculosis and pneumonia and less liable than the white race to malaria, yellow fever and cancer.

2. The Irish race has a rather low death-rate among its young children, but a very high one among adults, due to a considerable extent to the effects of tuberculosis, pneumonia and alcoholism.

3. The Germans appear to be particularly liable to disorders of the digestive organs and to cancer.

4. The Jews have a low death-rate and a more than average longevity; they are less affected than other races by consumption, pneumonia and alcolholism, but are especially liable to diabetes, locomotor ataxy and certain other diseases of the nervous system.—Dr. J. S. Billings in Med. Rec.

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THERAPEUTICS.

A Test in Pharmacal Ethics.

Mr. E. A. Schubert, of Fostoria, Ohio, in the course of a paper on pharmacal ethics, relates this account of a practical test of the professional integrity and competency of retail druggists in a given section of his State—a section, by the way, probably the equal in professional intelligence and honesty of the average community in Ohio and other States. "I espouse the thought," remarks Mr. Schubert, "that it would be a capital idea to write a prescription of easy composition and analysis, to see how many druggists would fill it correctly. I set to work immediately mailing to each of fifty physicians one of the prescriptions, at the same time asking him to write it as a prescription of his own, send some friend with it to his druggist to have it filled, a copy taken and returned to me with the compounded prescription. Out of the fifty requests sent out, I received thirty-seven answers. The prescription called for a three-ounce preparation, but placing them side by side I found twenty-one to be three-ounce preparations, seven were in size four ounces; while the rest ranged in size from five to eight ounces. It was to be an emulsion; nineteen were of that composition, the remainder were far from being true to name. In color, when correctly filled, it would be nearly white; of these twenty-two were true in color, while the remainder ranged from a steel gray to nearly all the known hues. The principal active ingredient was the acetate of morphine; thirteen only contained this, the remainder principally contained the sulphate. Out of the entire number returned, eleven were found to be filled correctly. The remainder were base substitutions, either through ignorance or intention. Of the eleven that were correct, nine came from the hands of Ph. G's, the remaining two were compounded by old and reliable druggists in the city. Of the twenty-six not properly filled we found five Ph. G.'s, the remainder were country druggists having very little experience in this line and located, with but few exceptions, in towns of 6,000 inhabitants and less." Can it be possible that this sort of recklessness and ignorance characterizes the profession in other intelligent communities?—Western Druggist.

Benzosol.

This substance is the benzoate of guaiacol. It contains fifty-four per cent. of guaiacol and occurs in small colorless, odorless and almost tasteless crystals, having a slight aromatic flavor. It is practically insoluble in water but solüble freely in hot alcohol, ether and chloroform. The intestinal juices split up the compound into its constituents and liberate the effective guaiacol under conditions that avoid the unpleasant taste and that reduce the local irritation which results when guaiacol itself is used. It has been used successfully, it is said whereever creosote or guaiacol are applicable; it is said to be especially useful as an antiseptic in intestinal disorders and in phthisis pulmonalis. Benzosol is best administered in chocolate pastilles with peppermint oil, or sugar, or else in powder of doses of from 3 to 12 grains, three or four times a day.—Med. Review.

The Antitoxin Treatment of Tetanus.

Hewlett, in the Practitioner, gives some statistics showing the reduction in the number of cases of tetanus since the use of antiseptics in wound treatment became general. He refers to the varied methods of treatment that have been adopted with but doubtful success. On experimental grounds he considers the modern antitoxin treatment the most promising. He then mentions the subject of artificial immunity, and goes on to describe the method of preparing the tetanus antitoxin from the horse by injections of germ-free tetanus toxins in gradually increasing doses. The blood serum from the horse thus treated is termed the tetanus antitoxin. The dose given has varied from 5 or 6 cc. to 167 cc. The author recommends 20 to 40 cc. for the first dose, followed by 10 to 20 cc. every 6 or 12 hours. The serum must be administered by hypodermic injection. The syringe should have a capacity of at least 10 cc., to avoid multiple punctures. It should be boiled in water for ten minutes before using, to sterilize it, and all precautions should be taken to avoid sepsis. No disturbance ever ensues from the antitoxin except urticaria. In employing the antitoxin as a remedy it ought to be administered as soon as the onset of tetanus is probable. Any distinct sign, such as stiffness of the neck, difficulty in opening the mouth, or even any considerable pain at the seat of injury, coming on a few days after the accident without apparent cause, should lead us to use the remedy. If a favorable result is to be expected, it is imperative to employ the antitoxin as early as possible. As a prophylactic a small dose of antitoxin (5 cc.) would probably suffice. Of 50 cases treated with antitoxin 16 died, or 32 per cent., which is much less than the ordinary mortality from tetanus. Local treatment (nitrate of silver, 1 : 100

solution, and iodine 1 part, along with an equal weight of potassium iodide, in 100 of water) must not be omitted, and free excision of the affected part should be practised. The patient should be placed in a darkened room, and perfect quietness enforced. Abundance of easily digested food should be administered, if necessary through a stomach tube during chloroform anæsthesia. Chloral may be given to induce sleep.

The Beef Tea Delusion.

Among the most important achievements of modern physiological chemistry is the refutation of the old theory that beef extracts, beef tea and animal broths are possessed of marked nutritive value. The late Dr. Austin Flint remarked on one occasion that thousands of patients have been starved to death while being fed on these preparations. In an editorial article in Modern Medicine the writer expresses the opinion that no greater mistake could be made than to undertake to nourish a patient upon animal extracts, and fortifies his position by citations from Bunge's Physiological and Pathological Chemistry which is regarded as one of our latest and most reliable authorities. According to this work bouillon contains much less than one per cent. gelatine—the only article of food which meat yields to boiling water. On the other hand, on preparing meat extracts the quantity of gelatine is reduced as much as possible, because it is in a high degree liable to putrifactive changes. The other constituents of bouillon are products of the oxidations and decompositions which take place in the animal organism. They cannot be regarded as nutritious, because they are no longer capable of yielding any kinetic energy or at most only such a small quantity that it is of no importance whatever. This applies especially to the creatin and creatinin, which, until the most recent times were considered as the source of energy in muscle. It has been demonstrated, however, that these substances are excreted unchanged in the urine, and being neither oxidized nor decomposed they cannot form a source of energy. Human muscle could hardly be influenced by the minute quantity of creatin contained in an ordinary plateful of soup. To conform with the latest teachings of physiological chemistry as set forth in the above citations a meat preparation should therefore consist essentially of the albuminous constituents of meat in a concentrated form, and so prepared as to be readily assimilated. It has been found that these conditions are best realized in a food product composed of albumoses, from which the peptones have been eliminated as completely as possible. Such a preparation is Somatose which has been shown by accurate comparative tests to contain the highest percentage of albuminous matter of all the food products in the market. Somatose is readily digested and completely assimilated and rapidly makes good the waste of tissues in disease producing a marked gain in flesh and strength. Its solubility in all ordinary fluids, tastelessness and odorlessness as well as its freedom from irritating effects on the gastro-intestinal tract are advantages not to be underestimated, especially in the alimentation of capricious invalids and children. Owing to its immense proportion of concentrated nitrogenous material Somatose need be administered only in small quantities and consequently a given quantity will reach much farther than that of any other food product. It is therefore not only the most nutritious, but the least expensive meat preparation in the market the last being a factor of considerable importance in the feeding of chronic invalids and convalescents.

Diphtheria Antitoxin.

Dr. M. Charteris, Professor of Materia Medica and Therapeutics, University of Glasgow, said at the last meeting of the British Medical Association:

I had the opportunities of observing, during last winter, cases of diphtheria at Belvidere Hospital, which were treated by Antitoxin. There seemed to me to be no doubt about its efficacy. The patches of membrane ceased to spread, and shrivelled up after the injections. The ashy color of the face was replaced by a healthy hue, and the pulse became fuller and stronger.

I was so much impressed with what I had seen that I resolved to institute an experimental research with regard to the different specimens of Antitoxin in the market. I obtained permission from the Home Office without any objection being raised, annd subsequently received from Germany a sample of diphtheria toxin, by the aid of which the Antitoxin is prepared. This toxin, in a dose of 0.55 ccm., kills a guinea-pig weighing from 250 to 300 Grm. in two days. I tested this sample on a guinea-pig weighing 450 Grm., using a dose proportionate to its weight. Death resulted in two days, being preceded by paralysis of the hind legs.

Such a toxin must be employed if one is to obtain a serum rich in Antitoxin. The antitoxic serum is tested under the control of the German Government in the following manner: An official withdraws a sample from about five litres of the serum ,and examines it for (1) sterility, and (2) strength.

The test of Antitoxin strength is carried out as follows: 15 ccm of a solution diluted to 1 to 4,000 is mixed with a dose of diphtheritic poison, which is ten times the minimum lethal dose for a guinea-pig of about

250 Grm. weight. Into such animals the mixture is injected, and should produce neither loss in weight nor local infiltration. This method of examination, when carried out under uniform conditions, gives most reliable results. One ccm. must contain 100 immunity units.

Acting on this information I resolved:

1. To determine if the different Antitoxins commonly sold in this country had any action on healthy guinea-pigs. I obtained samples of:

A. Aronson's Antitoxin.
B. Behring's No. 2.
C. Burrough's and Wellcome's.
D. British Institute of Preventive Medicine.

On the same day injections were made of the different samples under strict antiseptic conditions. In each case the dose for a child of 20 pounds was divided by 20, so that of the British Institute of Preventive Medicine and of Burroughs, Wellcome & Co. 1 ccm., in each case was injected, while of Aronson's ¼ ccm., and of Behring's ½ ccm. were used. None of the Antitoxins were found to produce ill effects, either local or general.

2. I next proceeded to test their efficacy in counteracting toxin. The four samples were diluted to 1 to 4,000 by weight.

3. The guinea-pigs experimented on weighed from 500 Grm. to 700 Grm.; 15 ccm. of the toxin in each case were injected with the diluted Antitoxin solution in the following proportions:

A. 15 ccm. toxin plus 9 ccm. of Aronson's Antitoxin.
B. 15 ccm. toxin plus 18 ccm. of Behring's.
C. 15 ccm. toxin plus40 ccm. of Burroughs' and Welcome's
D. 15 ccm. toxin plus 40 ccm. British Institute of Preventive Medicine.

The larger dose of the two latter Antitoxins necessitated injections into both sides of the abdominal walls of the two pigs employed. On the following day all the pigs were huddled together, and took no food. At the sites of the injections in the pigs 3 and 4, there was evidence of infiltration, but in pigs 1 and 2, this was not observed. Hardening followed the infiltration, and continued for thirteen days, but appeared to occasion no discomfort. nor any impairment of health.—British Med. Jour.

TAKA DIASTASE.

By FERDINAND LASCAR, Ph , Gr.

(From the Therapeutic Gazette, July 15, 1895)

In the human system a continued waste takes place which it is necessary to provide for, and to this end man partakes of food which must contain the elements for this purpose. To bring such food products into proper form, so that they can be assimilated and taken up in the system, the digestive organs perform their functions, and these are of a mechanical and chemical order. The food needed is both animal and vegetable in nature, the latter forming by far the greater and more important part. It can truly be said that upon the proper digestion of his food, man's health, happiness, and very life depend, and progressive science has fully demonstrated the unerring truth of this. Any irregularity or fault in the process of digestion very soon becomes manifest, and dyspepsia, malnutrition, and ill health follow. As the food man partakes of is two-fold, so is the process of digestion a twofold one, animal and nitrogenous foods needing an acid, while vegetable, starchy foods need an alkaline process to bring them into a soluble form ready for assimilation. The general idea about faulty digestion is that the stomach performs its duties improperly. While this, in very many instances, is undoubtedly so, the fact is, nevertheless, that in the greater number of cases of impaired digestion improperly performed processes of other organs are at the bottom of the evil in failing to properly convert the starchy food partaken of.

The changing of amylaceous food into dextrose and maltose is the beginning of digestion. All will have observed that bread, crackers, or potatoes, not being sweet in themselves, very soon become so when masticated and thoroughly mixed with the saliva in the mouth, and that their taste becomes sweeter the longer this is continued. This sweet taste is due to the conversion of the hydrated starch by the action of the saliva upon it, the saliva containing an enzyme called ptyalin, which, by its presence, splits up the starch into soluble products which I will mention later on, and this splitting-up process of the starchy food even continues after it has left the stomach. Animal foods needing the acids which are found in the stomach are digested there, but acids materially interfere with the action of enzymes which cause the conversion of starch, even destroying such action altogether. For this reason it seems practically incorrect to say that the conversion of starch continues after it leaves the mouth; but nature has provided against a too soon interference of acids, because it is now well understood that acid, especially hydrochloric acid, is secreted in the stomach a considerable time after the food has arrived there, and this may be one of the reasons why the converting of starch continues after it has left the mouth.

Since medical science has thoroughly grasped the philosophy of digestion, it has been the aim by artificial means to supply the enzymes which digestion calls for when they do not appear to be present in a sufficient quantity or are secreted in less potent form by the digestive organs. Science has succeeded fairly well in supplying gastric and pancreatic ferments when nature lags behind; but our success has so far been only a very partial one in supplying starch-converting substances, and for this reason a new and seemingly valuable discovery in this direction at once becomes interesting.

That diastase has an identical action with ptyalin upon starch is a fact long known, and for this reason the diastase contained in malt has been employed for this purpose. Diastase is contained to a lesser or greater extent in the different extracts of malt, and in minute quantities also in fermented malt preparations. In the latter the diastatic action, however, is generally totally destroyed by the acids present. Even in the best extract of malt there is only a limited and variable amount of diastase present; and while the extract of malt will continue to play an important role as a dietetic agent, its utility as a starch-converting agent will always remain a limited one. From time to time pure diastase has been offered to the profession, but none has so far proved of a sufficient potency to recommend itself to general use. Great progress in this direction is the discovery of Mr. Takamine, a chemist of no mean ability, who acted as one of the commissioners of Japan at the Cotton Exhibition in New Orleans several years ago. At that time he showed me an extract of malt, as manufactured in Japan, very rich in diastase and nutritive properties, and which I have mentioned in a paper on the diastatic and nutritive properties of malt extracts, published in the December number, 1891, of the Epitome of Medicine. In that paper I warned against too great heat in the manufacture of malt extracts, as heat impairs, and is even liable to totally destroy, the diastatic action. The avoiding of all undue heat in preparing diastase may be one of the reasons why the diastase which is now manufactured by Parke, Davis & Co., under Mr. Takamine's discoveries, is so perfect in its action in converting starch into maltose and dextrose. His product is a dry powder similar in appearance to some I received from a reputable German firm years ago, but is vastly superior in potency. Since the receipt of this German preparation I have frequently had occasion to experiment with various diastases, some being named vegetable ptyalin, but in no instance have they come up to the desired standard, and failed to fill the void felt for an enzyme which will accomplish what the enzyme of saliva in a healthy individual does accomplish.

In comparing notes of experiments lately conducted with taka diastase, other available diastases, and different extracts of malt, I find that the claim of the taka diastase that it will convert a hundred times its own weight of starch into a soluble state is well authenticated, for I have succeeded in converting even fifty per cent. more of starch than is claimed for it. Another point in favor of taka diastase above other similar products is the quickness of its action upon starch, for the action is almost instantaneous To convert one hundred parts of starch into a soluble state by the action of one part taka diastase, under proper conditions, it takes only four minutes until neither iodine test nor the microscope can detect unconverted starch. The product of converted starch with Mr. Takamine's taka diastase is to a great extent maltose. Compared with the time required by the best extract of malt to convert starch, this is certainly an excellent showing, for it took the best malt extract between seven and eight minutes to convert its own weight of starch into a soluble state, while with some other extracts of malt it took fifteen, twenty, and thirty minutes to partially accomplish this end. Tests with Fehling's solution to ascertain in the converted starch products the amount of contained sugar therein were equally favorable to taka diastase.

The erythro-dextrose splits up into erythro-dextrous and maltose, the ultimate result being a small amount of dextrin (anchro-dextrose) and eight or nine equivalents of maltose. Since Leuch's discovery of the specific starch-converting property of saliva and its ptyaline, we have lacked an agent of sufficient potency to accomplish what good healthy saliva does, and, for the first time, we find in taka diastase a substitute of undoubted worth, which, even in the presence of a minute quantity of acid, does not cease to be potent. The ptyaline in saliva is present there in a neutral or weak alkaline state, and for this reason it suggests itself that diastase, being an analogue with the former, acts also at its best in such a state, and is incompatible with acids. I employed in the greater number of my experiments with diastase carefully washed arrow-root,—a perfectly bland and neutral starch; but I found that starches giving a slight acid reaction on blue litmus were equally well converted by taka diastase. In testing diastase as to its potency, I would recommend that the iodine as well as the copper tests be employed, and that undue employment of heat under all circumstances should be guarded against, as heat, as already mentioned, destroys the action of diastase.

Taka diastase being a dry powder, tasteless and of no perceptible odor, can be given in very small bulk, and for this reason I think it will prove itself of value in infant feeding, where it is desirable to give starch-containing foods, provided said food would easily dissolve and the infant's saliva could be relied upon to perform that function. That the new diastase is destined to become a favorite with the profession I have no doubt, having acquainted myself with its potency in converting starch in a minimum of time into a form ready for absorption by the system, and I think it will be found the very remedy for which we have waited so long.

The Treatment of Cerebral Hemorrhage.

Apoplexy.—1. Loosen all tight linen; lay the patient down, with head a trifle elevated. Wrap the patient's arms and legs with sinapisms. Place a bag of ice under the patient's head. Vigorously rub the body with camphorated alcohol.

2. Administer the following purgative:

℞ Sodii sulphatis, ʒ v;
Sennæ (folliculis), ʒ iiss;
Aquæ bouillant., f ℥ xiiiss.

Make an infusion and strain.

3. If the pulse is not too feeble, give as soon as possible a hypodermic of a solution of ergotin (Dusort) containing fifteen grains.

4. If there is too much excitement, give two tablespoonfuls of,—

℞ Potassii bromidi,
Strontii bromidi,
Sodii bromidi, of each, ʒ i, gr. xv.;
Glycerini, f ℥ iss;
Syrupus aurantii corticis, f ℥ viss.

5. If the heart and pulse grow feeble, give from 1 to 5 hypodermics of sulphuric ether in the twenty-four hours.

6. Continue this treatment throughout the attack,—sometimes lasting several days, and support the patient with milk and beef-tea, taken in small amounts.

Period of Paralysis.—1. Watch carefully the patient's mode of living; allow him to eat little at evening; food mostly vegetables, milk, eggs, soup, little meat; no alcohol or tobacco; no intellectual fatigue. Each morning sponge-bath of alcohol and water, followed by frictions with flannel. Watch carefully all pressure-points for bed-sores; order a water-bed, and dust the spots with a powder of cinchona and starch.

2. Maintain a loose condition of the bowels, and give the following pill every eight days:

℞ Aloes, gr. iiss;
Rhubarb, gr. ivss.
M. et. div. in pil. No. 20.

3. Take during twenty days of the month a tablespoonful of the following solution in a glass of milk:

℞ Strontii iodi, ʒ iiss;
Sodii arsenitis, gr. iss;
Aquae destillatae, f ℥ ixss.

4. Do not practice electro-therapy during the first months of the paralysis, but maintain massage regularly afterwards; commence with a feeble continuous current daily for twenty minutes.

Prophylaxis.—1. Those predisposed are counselled to rest in bed, without sleeping, after meals.

Upon rising sponge lightly with alcohol and water, with dry friction afterwards and a short walk without fatigue.

3. Avoid sudden changes of temperature; intellectual fatigue or violent emotions.

4. Substantial but light food, white meats, fish, eggs, vegetables, fruits, but little dark meats; no alcohols; no shell-fish; don't rest too long at the table in a heated room, and take a walk after each meal.

5. Maintain regularity of the bowels, if necessary by means of salts.

6. During fifteen days per month take in a cup of milk a spoonful of the following:

℞ Potassii iodi,
Potassii bromidi, of each, ʒ i;
Aquae destillatae, f ℥ ixss.
—La Tribune Medicale.—Therap. Gazette.

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Care of the Mouth in Febrile Patients.

Dr. Rosenbach (Med. Week) says that as strict cleanliness of the mouth may prevent many complications of infectious origin, the patient should be urged to rinse out his mouth several times during the day with water (to which may be added a little tincture of myrrh or eau de cologne), so that the mouth will be kept slightly moist. The author suggests, if the gums show a tendency to bleed, to rub them gently, twice a day, with powdered boric acid. In the case of comatose patients, the mouth should be frequently examined and wiped with a clean, fine linen cloth. Small ulcerations made by the teeth on the lips should be dusted with powdered boric acid or potassium chlorate. It is also well, when the patient breathes exclusively through the mouth, during sleep or coma, to cover his mouth with a layer of gauze moistened with a solution of boric acid.

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Pasteur.

By the death of Pasteur the world has lost one of the greatest scientists of this, the age of great scientists. Tyndall, Huxley, and Helmholtz have died within a short time It can hardly be expected that we shall see in our generation another such group of scientific workers. Virchow and Koch are the only men now living who are worthy to be placed in the same rank with these great men.

Pasteur was born at Dole, on December 27th, 1822, of very humble parentage. His early life was one long struggle with poverty. His surpassing genius and persistent energy, however, overcame all obstacles and the last thirty years of his life were crowded with honors. The greatest work of his earlier life was entitled "A New Example of Fermentation, showing that the Animalcula Infusoria is able to exist without free Oxygen," and was published in 1863. Although he had ranked high as a scientist before that date, his reputation was established and made world wide by the researches thus published. The theories he promulgated and which are now universally held were revolutionary in the extreme. Never was the peculiarity of his method of work better demonstrated than at this time. He was a man of unceasing industry in observing and collecting facts. He never made a statement or advanced a theory until it was fortified beyond all doubt by indisputable proof. Such an array of facts did he bring in 1863 to establish his theory of fermentation that its acceptance was merely a matter of time. This work was the foundation of the present germ theory of disease. He demonstrated that fermentation could take place without the presence of oxygen and was due to the presence of micro-organisms. This work was the inspiration of all the bacteriological work that has since been done.

The peculiarity of Pasteur's method of work we have already referred to. He was a patient and untiring observer and collector of facts. This is an important qualification of a scientist but is alone of but little value. Pasteur possesed in addition to this, the power little short of genius of generalizing and drawing correct conclusions from the facts observed. No other man has excelled him in this, except possibly Darwin. He was never in a hurry to publish a result until its truth had been absolutely proved. His ability to draw correct conclusions from an array of demonstrated facts was almost infallible.

Unlike many laboratory workers, Pasteur was eminently practical and his researches have already resulted in incalculable benefit to the race. A single example will illustrate this. In 1865 the silk industry of France produced a revenue of 130,000,000 f. In twelve years it fell, owing to a disease in the silk worm to 8,000,000 f. and the industry was threatened with annihilation. Pasteur was appealed to and induced to undertake the study of this disease. Abandoning his cherished work he enteerd with all his strength into its study and after long research discovered that the disease was due to a micro-organism which affected the worm, the moth, and the egg. He suggested a remedy and in a short time the silk industry of France was restored to more than its original prosperity. A few years later the wine industry of France was threatened with ruin, owing to an unexplained fermentation in the wine. This was investigated by Pasteur, the cause was discovered, and the industry was saved. Vastly important as each of these has been in the industrial history of the century, we must attach far more significance to his clear insight into the genesis of the various infectious diseases and to the rational and largely successful methods taken, in consequence, to check their inroads. We do not generally realize that to Pasteur we owe our modern aseptic and antiseptic surgery. The so-called "triumphs of modern surgery" are almost wholly dependent upon the painstaking researches of this truly profound scientific student. Great as was the work of Lister he only applied the facts which Pasteur had so laboriously gleaned. The ability to make such application was, to be sure, an evidence of genius and we would not for an instant belittle Lister's work.

Pasteur's results were largely secured by animal experimentation.

It was natural therefore that he should first study the infectious diseases from which animals suffer. He thus studied and traced to their cause, charbon or splenic fever, fowl cholera, swine fever, osteo-myelitis, and hydrophobia. He discovered many facts regarding suppuration, and septicæmia. His whole method of work being that of actual experimentation, chiefly with animals, he did not make many discoveries of the actual germs of the diseases affecting the human race, but his work established the germ theory of disease more thoroughly than could have been done by any amount of observation in the human subject alone.

A writer on the perfection of Pasteur's experimental methods has said: "The caution exercised by Pasteur, both in the execution of his experiments and in the reasoning based upon them, is perfectly evident to those who, through the practice of severe experimental inquiry, have rendered themselves competent to judge of good experimental work. He found germs in the mercury used to isolate the air. He was never sure that they did not cling to the instruments he employed, or to his own person. Thus when he opened his hermetically sealed flasks upon the Mer-de-Glace, he had his eye upon the file used to detach the drawn-out necks of his bottles; and he was careful to stand to leeward when each flask was opened. Using these precautions, he found the glacier air incompetent in nineteen cases out of twenty to generate life, while similar flasks opened amid the vegetation of the lowlands were soon crowded with living things."

The world would indeed be ungrateful and the medical profession most ungrateful of all, should it allow such a man to pass away unnoticed and unhonored.

The Treatment of the Insane.

There is probably no subject which is more neglected by the general practitioner than Psychiatry. Few, if any lectures are delivered in our colleges, and only very few of the latter offer opportunity for the clinical study of insanity. That this is a bad defect in our educational scheme, the practitioner discovers ere he has long been in active pursuit of practice. The diagnosis appals him, and being a terra incognita to him he is at sea in mapping out the treatment. Our medical journals, too, rarely contain practical papers on insanity; our readers are therefore fortunate in obtaining in the present number of the Journal, a succinct but practical and therefore useful resume of the whole subject of insanity. The brevity of the article precludes a detailed account of the symptoms, prognosis, and treatment, but enough is brought out to afford a very good general idea.

Massage.

While the claims and assertions of the more enthusiastic advocates of massage must be taken with a liberal allowance, still on the other hand many unnatural conditions may be corrected by intelligent manipulation if not more quickly at least more certainly and permanently than by medication. Massage was probably the first system devised for the relief of suffering humanity and was certainly the first to reach anything like reasonable perfection. It is therefore entitled to respectful consideration. Our modern systems are based on a Chinese treatise written about three thousand years ago and translated into French in the last century. Many of the procedures have been modified from time to time to conform with our better knowledge of anatomy and physiology. Notwithstanding the numerous changes that have been made and improvements that have been devised massage is the contribution of China to the healing science.

Its claim to usefulness rests upon the fact that by the application of pressure over a given region the blood is forced out, carrying with it its portion of vitiated material, and is replaced by a fresh supply more quickly than by the natural action of the circulatory system. The importance of this action has been magnified greatly and massage has too often served the quack and charlaten in extorting money from the credulous. It is, however, a valuable method of treatment when properly and scientifically employed. When thus applied it is capable of rendering the greatest aid to the practitioner in many cases, and the study of the science as a means of healing will amply repay the time and labor devoted to it.

Although the more skillful followers of this system of treatment claim to be able to reach every organ of the body and benefit it by a combination of massage and gymnastic exercises, it is generally admitted to be more useful for the skin and such organs as are located near the surface. Of these the ones which are most easily influenced by massage are those whose motor points are also superficial as in the various muscles of the face. The general direction is given to one who would administer this treatment to grasp in the hand at once as much as possible of a single muscle, separating it from its neighbors. The blood is thus most effectually expelled, especially if the motion is made in the direction of the heart.

At a recent meeting of the Trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL. D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

BOOK REVIEWS.

Hayem & Hare's Physical and Natural Therapeutics.—Physical and Natural Therapeutics. The Remedial Use of Heat, Electricity, Modifications of Atmospheric Pressure, Climates and Mineral Waters. By Georges Hayem, M.D., Professor of Clinical Medicine in the Faculty of Medicine of Paris. Edited with the assent of the author, by Hobart Armory Hare, M.D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. With 113 engravings. Philadelphia, Lea Brothers & Co., Publishers, 1895. (Pp.-407. Price $2.00.)

This work is unique in character, not so much because it contains information not to be found elsewhere, as because the facts it contains have not before been collected into one volume, but are scattered throughout medical literature. The physician constantly meets cases which he desires to send to health resorts where they may gain the benefits of change of climate or mineral waters. In other instances he believes that little is to be gained by the administration of drugs, but that much may be gained by the proper application of heat or cold, electricity, or baths. It is the object of this book to present in concise form the information which the physician needs upon these various topics. The work embodies not only the views of the author but those of numerous specialists upon these various subjects. The American editor has attempted, quite successfully, to render the work more practical to the American physician by the addition of articles on American mineral springs and climate.

The first chapter is devoted to atmospheric pressure and the effects produced by change of climate. Many of the benefits derived from a change of climate are believed to be largely due to change of atmospheric pressure. Numerous means have been devised to secure such pressure without the trouble and expense of removing the patient. As to their practical advantages there is considerable room for doubt. The author has, however, reviewed them impartially and presents a full discussion of the pneumatic cabinet and its applications. In the chapter on climate, after considering the various elements upon which the value of climate depends, the author describes somewhat briefly the claims of various climates. Many of these are of but little value to the American physician. The section of the American editor is well written and considers a number of climates of this continent. It is, however, short and leaves the subject in a somewhat unsatisfactory condition. The same is also true of the section on heat and cold as therapeutic measures. The chapter on mineral waters is very good, but owing to its brevity it can prove only an outline of their uses. The chapter on electricity occupies nearly half of the bok. The work in this chapter while it is very well done, concise, and practical, posesses no merit over numerous other works on the subject. As electricity is so far removed in practical medicine from climate and mineral waters, it seems to us that it would have been wise had the author omitted it from his work and devoted more attention to the remaining portion. On the whole, however, the book is an excellent one, and contains much practical information for the practicing physician.

Clinical Lectures on Diseases of the Nervous System Delivered at the National Hospital for the Paralyzed and Epileptic, London. By W. R. Gowers, M. D., F. R. S., Physician to the Hospital; Consulting Physician to the University College Hospital. Philadelphia: P. Blackiston, Son & Co., 1012 Walnut Street, 1895. (Pp. 9-279. Price $2.00.)

The name of Dr. Gowers is a sufficient guarantee of the scientific merit of any book upon which it may appear. Few writers in the English language who have written so much, have maintained so constantly a high scientific standard. An accurate observer and clear thinker, his work is always worthy the attention of the professional man. The lectures of which this volume is composed were delivered at the National Hospital for Paralyzed and Epileptics and are reprinted from various journals. They are twenty in number. The first is devoted to the precise diagnosis of various diseases of the nervous system. Few other writers have done so much to render diagnosis exact and to strike out uncertainties and inaccuracies. The subject is continued in the second lecture which is devoted to mistaken diagnosis. Other subjects considered are bulbar paralysis, facial paralysis, myelitis, locomotor ataxy, infantile epilepsy, neuralgia, and optic neuritis.

The book not only evinces great learning but is full of suggestions which must provoke thought on the part of the careful reader.

Transactions of the Medical Society of the State of New York. 1895. Published by the Society (Pp. viii-387).

The volume of Transactions of the Eighty-ninth Annual Session of the New York State Medical Society is fully equal to that of previous years. The work of this society has for several years been exceptionally good. In the present volume about forty scientific papers are reported together with the usual tables, and reports which accompany such works. A very interesting discussion is that on Electricity in medicine. A number of papers on medico-legal medicine are also of more than the usual interest. The discussion on the question "Shall insane criminals be imprisoned or put to death?" is especially notable. The papers covered a very wide range of subjects and are well divided between medicine, surgery and special departments of practice. The most notable obituary is that of Prof. Loomis, a former President of the Society and one of its most active workers.

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Therapeutics of Salophen.

Unlike the majority of new remedies the field of usefulness of Salophen has gradually extended, as physicians became better acquainted with its therapeutic properties. Originally introduced as an anti-rheumatic it was soon found that while equal to salicylic acid and its salts in efficiency it surpassed them in safety, freedom from gastric disturbance, debilitating action on the heart and circulatory system, and unpleasant effects on the nervous symptoms. As might be expected from its possession of these advantages Salophen proved much better adapted forcontinued administration in rheumatic cases than the salicylates. Further clinical investigation showed that aside from antirheumatic virtues, this remedy was also an excellent antineuralgic and nervine, which frequently would relieve the pains of migraine, cephalalgia, odontalgia, sciatica, etc., in cases where the customary remedies had been employed with little or no success. As recently pointed out by Dr. Claus a close relationship exists between the gouty and rheumatic diathesis and nervous affections as migraine and this may be the reason why Salophen is so effective in neuralgic troubles. The following estimate of the therapeutic value of the drug occurs in a " Manual of Therapeutics," by Dr. A. A. Stevens.

"It is an excellent remedy in acute articular rheumatism, equally efficient, but less irritating than salol or salicylic acid. It does not disturb the stomach and may be given for a long period without deleterious results. Likē other salicyl preparations it is less efficient in chronic rheumatism. It is likewise a useful analgesic and may be employed as a substitute for phenacetine and antipyrine in migraine, neuralgia, headache, and the pains of influenza.

MEDICAL NEWS AND NOTES.

Ministerial Indorsements of Medicines.—We are sorry to see the names of Christian ministers and persons occupying important positions in the church circulating through the country indorsing bare-faced frauds which are poorly executed, and no better than Indian charms. Whenever a minister of the Gospel allows his name to be attached to anything whose advertisements make statements impossible of fulfillment, or contrary to established principles of science, and especially to be mixed up with all sorts of testimonials written obviously by the most ignorant and uncultivated persons, he loses the respect, and justly, of that class of the community which in the long run fixes the estimate in which he is held.

This, together with similar exhibitions of weakness, often accounts for the failure of young men who otherwise give bright promise of success, and the early retirement of those who in spite of them had attained a good standing.

In the interest solely of our readers we advise them to pay no attention to a ministerial testimonial to remedies whose composition is a secret, or which promise positively to cure otherwise incurable or generally fatal diseases. And all the more so if the testimonial contains reference to the Almighty and providential direction to buy the medicine. You may be sure then that whatever other effect the remedy has had, it has either weakened or has not improved the condition of the nerve cells upon which sound judgment depends.

When ministers go further and surrender their photographs to patent medicine venders to be used in advertisements and on bottles, they render themselves liable to one of two suspicions: Either that they have an inordinate desire to appear before the public, in which case such extravagant vanity must weaken their influence; or that they have received a compensation for the privilege. For, that quacks of all sorts are ready to pay largely for certificates from physicians, for editorial notices, and for the privilege of publishing letters from and photographs of clergymen, cannot be doubted.

Not only do they thus render themselves liable to suspicion, but they grieve every truly refined member of their congregations, and every member, in fact, of their denomination who sees their pictures and letters displayed for such purposes. Could many of the ministers know what is said of them, self-interest would lead them to refuse in every case. It should be taken as an insult by every minister of the Gospel of Christ to be asked to furnish his photograph, or to consent to its use, as a part of a patent medicine or any other advertisement.

In one instance the name of such a person was proposed for the pastor of one of the best churches in Methodism. A brother of high character and respectability, noted for his kindness when speaking of ministers, rose and said: "I hope that this brother will not become our pastor." "Why?" said half a dozen voices. He did not reply, but spread before them a newspaper containing the photograph of the minister, in connection with three or four letters, one from himself, interlarded with ascriptions of praise to the Deity for having led him to buy the —— pills. His name was not mentioned again.—Christian Advocate.

The Experiment of Temperance.—The Temperance Hospital has attained its majority, and has celebrated the event with justifiable satisfaction. The newspapers describing the proceedings speak of the treatment adopted at this hospital as an experiment, and perhaps one may be allowed to smile at the want of perception which has led certain people to attack various general hospitals on the vague charge of performing experiments on patients, and missing a case apparently made on purpose for them, a very text for their homilies, a hospital whose very reason for existence is the trying of a great experiment on its patients—the treatment of their ailments without the use of alcohol. The fact is, however, that the mere experiment whether it is possible to treat disease without alcohol, is a needless one, for we all know it can be done; and if the supporters of this hospital wish their experiment to show that disease can be better treated without alcohol, it is equally useless, for in regard to that its results are absolutely inconclusive. The Temperance Hospital's apology for its existence, however, if it needs any apology, stands on quite different grounds. It is a place where teetotallers may go without feeling that, in accepting the benefits of hospital treatment, they are running the risk of having to break their vow, and to which they may give recommendations without the consciousness that they are exposing their recipients to temptation to what they regard as actual sin. To those persons who look upon alcohol as a most useful medicine and certain alcoholic liquors as most pleasant drinks, this may seem narrow and absurd, but considering the strength of the conviction of so many teetotallers, the fervent missionary spirit that possesses them, and the vehemence with which they urge their favorite dogmas, the wonder is not that there is one temperance hospital, but that there are not dozens. As an experiment, then, we would say that the Temperance Hospital is useless. Not only are its own results inconclusive, but the non-alcoholic treatment of disease—the experiment, if one likes to call it so—is carried out upon a far larger scale in the general hospitals of London than it is within the walls of the Temperance Hospital. But as a resort for teetotallers, a refuge from temptation, this hospital is unique, and the fact that it is so, and that it still finds difficulties in obtaining enough money to keep its wards open, raises somewhat sad reflections regarding many of the loud professions of the total abstinence party. One hospital for so great a cause! In a wealthy country like England, people are expected to back their beliefs with cash. This is the modern form of martyrdom, and of those who will not do so it is said, perhaps unkindly, that after all they had "rather turn than burn."—Brit. Med. Jour.

Blindness has increased steadily in this country during the past forty years. The increase is not only actual, but relative to the population. In some localities where the inhabitants are largely foreign born and rely upon midwives, the rate of increase has been five times greater than that of the population. Over twenty per cent., and in some regions fully thirty per cent. of all blindness is due directly to ophthalmia neonatorum. Efforts have been made to restrict the occurrence of the disease by legislation. New York was the first State to take steps in this direction, by laws passed in 1890. Since that time, several other States have passed similar laws. The chief clause requires that any midwife or nurse, having charge of an infant, who notices that one or both eyes are inflamed or reddened at any time within two weeks after its birth, shall report that fact in writing within six hours to the health officer, or some legally qualified practitioner of medicine. Although this law has been in force for five years in New York, but twelve convictions have resulted for its violation. Investigations show that the disease has not diminished during this time. Non-enforcement of these laws is due to two grave errors in their construction. The privilege of reporting to some practitioner allows too great latitude. Reports should be made to the health officer, an official who should exist in every town. The second error is the fact that no particular person is made responsible for its enforcement. This should also rest with the health officer, who should be responsible for the enforcement of the law under penalty for negligence.—Archives of Pediatrics.

As soon as the police and prison officials of this country adopt the anthropometric system that has been used in France for years, they will have no more trouble in identifying arrested criminals with absolute certainty, and any such embarrassment as now confronts the local United States court will be made impossible. The men accused of robbing the Post Offices at Hoboken and Springfield, by such simple devices as shaving off their beards, blackening their eyes, and changing their clothes, have managed thoroughly to confuse the witnesses against them, and, possibly enough, are in much less danger of conviction than if, in these superficial peculiarities, they had remained unchanged. No such difficulty could have arisen, and the men would have attempted no such transmogrification of their apeparance, had their first arrest been followed immediately by the taking of measurements after the method invented by Bertillon, and since made perfect by him and others. The system is of proved practicability and value. A man who has once been submitted to it, and whose record once gets into the police books, can always thereafter be identified beyond any chance of doubt, no matter how many years elapse between one arrest and another, and no matter how severe are the mutilations, accidental or intentional, he may undergo.—N. Y. Times.

We have from time to time adverted on the necessity for some general legislation to prevent criminals from purchasing deadly drugs, and recently the use of chloral by criminals for criminal ends was made the subject of an investigation by the captain of that notorious New York precinct called "The Tenderloin." Having been informed that the so-called "knock-out drops" (that have the name of completing the work of alcohol in the operations of thieves who desire to stupefy and afterward clean out their partially intoxicated victims) contain chloral, Captain Pickett sent out a detective to investigate the sale of chloral and other stupefying drugs, and found that it is altogether too easy to purchase. He is inclined to regard the law relating to the purchase and possession of poisons as a weak one, as it does not provide for the detention or punishment of persons having the "knock-out drops" in possession, who may have been arrested on suspicion. He states that the offense is grave enough to make it a felony to the person on whom is found the drug for any unlawful purpose. The druggists who sold chloral indiscriminately to the detective will be prosecuted. A case of death has recently been held to be referable to these "knock-out drops."—Jour. of the Am. Med. Asso.

MISCELLANEOUS.

Report of Three Cases in Which the Murphy Button was Employed.

Ruth (Matthews' Medical Quarterly) reports three cases in which the Murphy button was employed.

A child of five years had suffered from intestinal obstruction for three months. This was due to sarcoma, so extensive that the entire cæcum, two inches of the colon, three-quarters of an inch of the ileum and the appendix had to be removed. The continuity of the gut was restored by a Murphy button. The child lived more than six months, and died of recurrence.

The second patient was thirteen years old. A portion of the ileum was resected because of obstruction due to tumor of the mesentery. End-to-end approximation was made with a large size Murphy button; this was passed on the fourteenth day.

The third case, twenty-eight years old, was suffering from a fistulous opening into the jeunum. Five inches of gut, including the fistula, were resected and the continuity restored by the button. As when the abdomen was nearly closed it was noticed that fæcal gas was passing, the wound was reopened to ascertain its source, and five inches more of injured gut removed, containing a pus cavity near the mesentery. Another junction was made as before, but the opening through which the gas passed was not found. This case perished in three hours.

Ruth claims for the button that it shortens the time required to do an intestinal anastomosis fifteen to forty minutes; that, if properly applied, leakage is impossible, and no hydraulic or gaseous pressure is needed to determine the fact. It is the strongest junction known. It gives the minimum cicatrix and contraction, and is the only plan that can be relied upon to make the ideal junction. After completing its work it leaves no foreign body of any kind behind. There is no danger of causing obstruction by failure of the button to pass the ileo-cæcal valve. The greatly lessened mortality makes this hitherto most dreaded field of work compare favorably with other intraperitoneal operations. It should relegate faecal fistulæ following operations for strangulated hernia and intestinal resections to the past. No care need be taken to have the proximal and distal portion of the gut correspond in size.—Thera. Gazette.

Schools of Medicine.

Candidly, at this period of the world's history and the advanced status of education, we see no occasion for invidious doctrinal and class distinctions among upright and conscientious practitioners of medicine. There are many in both eclectic and homœopathic ranks just as capable, intelligent and advanced as the best; there are homœopathic schools that, in the character of instruction given and the general facilities afforded for thorough medical education, are unsurpassed by any medical institution on the continent of America; likewise eclectic institutions equally as effective. In spite of the captious jealousies and the dissensions constantly being sowed by "small souls," medical science is too broad and of too great moment to be hampered by petty quarrels over matters that are, at best, of no special import, arising as they do from personal belief and individual conscience. We believe the profession at large is willing to accord the title of "regular" to any individual who seeks to deserve the same and has received a thorough medical education; perfect professional affiliation has already been granted in a vast number of instances. But!—Just so long as the upholders of two branches of medicine insist upon their own sectarianism by means of the words "eclectic" and homeœopath," and, so to speak, "trade" upon these titles; and just so long as they insist upon applying to other medical men the term "allopath"—a word coined by the "homœopaths" and adopted by the "eclectics" as a term of reproach and revilement—just so long they will foster dogmatism, intolerance, a non-scientific spirit, and clog the wheels of medical progress. Per contra, the medical profession at large applies no titles to these two branches which they have not themselves adopted or to a certain extent justified by their own enunciation as a class distinction.

However suitable "eclectic" and homœopath" may have been in the early evolution it cannot be denied that the regulars are likewise to blame in that the more narrow-minded ignore that charity which should be given to all, and foster differences in the vilest spirit of trade unoinism. At the same time, if "homœopaths" and "eclectics" will insist upon a trademark medicine, and the misuse of the term "allopath," just so long these exclusives court from the rest of the medical profession the same scant courtesy which they themselves afford; but should they choose to drop the trademark and enroll themselves simply as practitioners and exponents of medicine, the limit of recognition and affiliation must be measured by honor, honesty, and truth.—Med. Age.

Bacteria in School Rooms.

In a recent communication to the Hamburg Medical Society, M. Ruete details the results of his bacteriologic examination of the air of school rooms. He made use of Hueppe's method and made his investigations at 2:30 in the afternoons. While these were always made under the same conditions the results were very variable. He found a minimum of 1,500 bacteria to the cubic meter, a maximum of 3,000,000 and a mean of 268,000. Analogous researches gave Hesse an average of only 9,500. Among the bacteria observed the author calls attention (Bulletin Medical de Paris) to a motile bacillus which does not develop on agar, but on gelatin plaques gives rise to circular colonies with crenated edges; it can also be cultivated on milk and potato; pure cultures kili mice in twenty-four hours and their blood is rapidly fatal to guinea-pigs. Ruete has been able to extract toxins from the blood of animals thus killed.—Jour. Amer. Med. Assoc.

Cause of Early Death After Operations on the Internal Organs.

Thiercelin and Jayle describe the necropsies made on seven cases of abdominal section (five removal of appendages, one ovarian cyst, one abdominal hysterectomy) which had died, six within three days and one within six days after the operation. In five, including the case which lived six days, there was distinct acute fatty degeneration of the liver. In the remaining two, where the lesion could not be detected by the naked eye, cloudy swelling of the hepatic cells was discovered on microscopical examination. It is expressly indicated that in none of the seven cases did suppurative peritonitis exist. Thiercelin and Jayle then examined the liver from a case of death from hemorrhage six hours after operation for a ruptured extra-uterine fetal cyst. The liver was absolutely free from fatty changes. But in the liver of a child that died a week after an operation for congenital dislocation of the hip acute fatty changes were discovered. The same condition was seen in the liver of a man dead from septicæmia due to phlegmonous inflammation of the larynx. Other evidence is infected by streptococci. Cirrhosis, etc., predispose greatly to this infection after laparotomy.—Annals Ardmus of Gy.

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GAILLARD'S MEDICAL JOURNAL.

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ORIGINAL ARTICLES.

UNUSUAL CAECA.

In One Hundred and Thirty Autopsies.

BY BYRON ROBINSON, M D ,
Chicago.

Besides the four types of cæca, symmetrical fœtal, non-symmetrical, and atrophic, one meets with peculiar cæca which for lack of other names, I will designate as atrophic, hypertrophic in regard to size, and in regard to position as non-descended, partially descended, and excessive descent. Perhaps no part of the human bowel varies so much as the cæcum, except the length of the small intestines which varies from 10½ to 32 feet (in 130 cases). I mean by the cæcum, that larger part of the bowel below the entering ileum. In some subjects the cæcum is exceptionally small. It is disproportionately insignificant in size. It tapers to a point sharing in its smallness with the appendix. It is fœtal in type. The smaller the cæcum the more apt it is to be in its natural location, i.e., to lie on the right of the psoas and on it. It may be observed that a very small cæcum is, however, apt to be located well up on the psoas, but that is more apparent than real, for as it shrinks it appears high. The insignificant size of the cæcum must depend on small blood supply. But the blood supply must have been curtailed very early, perhaps at the third fœtal month, i.e., long before the peritoneum was completed in its growth which appears to me to be about the sixth fœtal month. The small, atrophic cæcum rests back on deficient blood supply through some defect which the cæcum acquires during its circuit of travels to its home in the right iliac fossa. Many vicissitudes of growth and fluctuations of blood supply as well as inflammatory accidents arise as the cæcum makes its journey from the navel region to the right iliac fossa. The chief breaker of its slow journey is peritonitis.

The most impressive unusual cæca are the excessively developed ones which lie on the pelvic floor or are turned toward the middle of the abdomen, and lie in the midst of the small intestines—the dangerous grounds of peritonitis.

The hypertrophic cæcum is one with excessive descent. It cannot be accommodated in the right iliac fossa. It almost fills the pelvis. It is of similar structure to the ascending colon, except it is larger. It has haustra, tænia coli and is always entirely covered by peritoneum. It will frequently touch every organ in the abdominal cavity, and herniate through every abdominal foramen. It looks like a monster filling up the lower abdomen. The giant cæcum is apt to be anchored along with the ilium on a short mesenterium commune of from one to three inches long so that it easily floats almost anywhere in the abdomen like the free cæca of a cow or horse. The hypertrophic cæcum generally possesses a long and wide appendix. It is likely a kind of ativism to the old monstrous herbivoral stomach. The danger of these large and giant cæca is volvulus, of which I saw several samples. It and the ileum made in one case almost one entire turn on its mesenterium commune as an axis. The axial rotation of the cæcum and ileum had not produced obstruction, but the twist would not unwind and remain so, for it would fly back like a steel spring. Dr. Baker, of the Chicago Veterinary College informs me that not infrequently horses die of volvulsu of the cæcum and from my examinations it would appear as if cows and squirrels as well as horses would easily suffer from volvulus as all such have enormous cæca. I have been unable to determine whether the atrophic cæcum or the hypertrophic developed more appendicitis than the appendix of the ordinary cæcum. Yet from careful observations on these 130 autopsies it would appear that the hypertrophic cæcum does not lie on the psoas, which muscle seems to me has such a large ætiology in producing appendicitis from its range of action against the appendix. The atrophic cæcum would perhaps lead to more appendicitis than the hypertrophic, for the atrophic cæcum and its appendix more frequently lie on or close to the psoas muscle. The range of action of the psoas is more apt to strike the atrophic than the hypertrophic. The above 130 autopsies seem to me to produce the view that appendicitis is often due to the traumatic action of the psoas muscle on the appendix. This theory I have held for some time and followed up by these 130 adult cases in Cook County Morgue as well as some 30 infants and fœtuses to substantiate it. Besides I dissected nearly one hundred cadavers which, though not definitely recorded as the others, only confirm me in my belief that the action of the psoas muscle is a factor in the production of appendicitis. Of course two hundred cases are insufficient to prove any pathologic theory, but in my laparatomies I can see still more proof than this.

Another peculiar cæcum is the non-descended or the partially descended cæcum. In the 130 cases a non-descended or partially descended occurred some twelve times. Two of these cases were complete non-descent, i.e., the cæca lay under the liver. The ten other cases simply showed all degrees of descent. The cæcum which is non-descended and lies immediately under the liver is generally in the position it is found in the fœtus under three months. A peritonitis occurred at the time in fœtal life when the cæcum had arrived at the point immediately under the liver. The resulting adhesive bands prevented any further travel of the cæcum toward its adult home. Yet only two cases of complete non-descent were present in 130 cases. In complete non-descent the ilium is apt to enter the cœcum from its under surface, or slightly toward the posterior surface, pass around behind the cæcum and enter it directly from the right side. In complete non-descended cæcum the appendix will generally lie under the liver, just to the right of the gall-bladder. Dr. Lucy Waite and I diagnosed and successfully operated on a ruptured appendix, which with its cæcum lay immediately

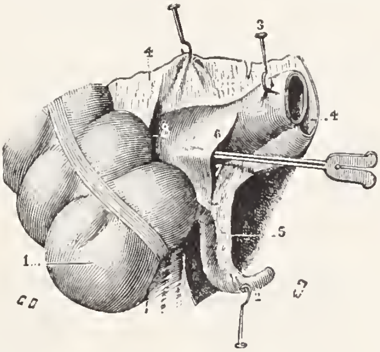

FIG 5.

Fig. 5 (after Testut 1895) represents the inferior ileo-cæcal fossa in which a sound is passed. 1. cæcum; 2. appendix; 3, ileum, held by a hook; 4, mesentery; 5, mesenteriolum; 6, bloodless fold which may also be called the ileo-appendicular fold; 7, the fossa ileo-cæcal is inferior, in which also is seen the sound; 8, fossa ileo-cæcalis superior, which should be marked more prominent.

under the liver. In men, who have little gall-bladder trouble at thirty or under, one is more apt to be correct in his diagnosis. One case was a man of thirty years. But in women, where gall-bladder troubles occur in the young as appendicitis, the diagnosis will not be so certain. However, the partially descended cæcum is not uncommon. It occurred in 7 per cent. of 128 cases. Of course most of this 7 per cent. was almost completely descended, but a slight distance, say from one to three inches, lacked completion. So far as I could note, in general, the partially descended cæcum, is the safer in appendicitis, because in general it nearly always (with its appendix) lies to the right of the psoas muscle. The more any cæcum with its appendix lies to the right of the psoas muscle the safer the attack of appendicitis will be. In the partially descended cæcum one can observe two peculiarities. The first is the peculiar ending of the ileum. The second is the tendency to rotation of the ileum and cæcum on its axis. Figures 10 and 11 may be taken as good samples. They were drawn from two of the 130 cases to represent two partially descended cæca with peculiar ending of the ileum and slight volvulus in Fig. 10. In Fig. 11 the cæcum and appendix became arrested under the liver, no doubt by some intra-

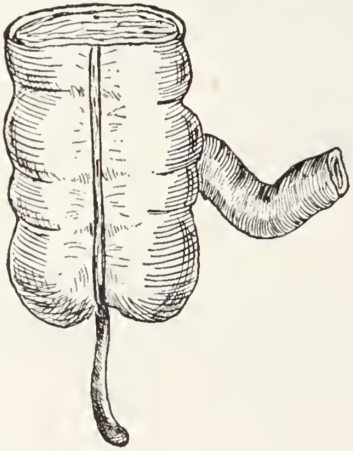

Fig 6

A symmetrical caecum.

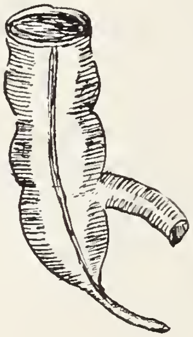

Fig. 7

Fœtal type of caecum.

Fig. 6 (after author) represents a symmetrical cæcum which occurs in 20 per cent. of subjects.

Fig. 7 (after author) represents a cæcum of the fœtal type which occurs in 30 per cent. of subjects.

uterine peritonitis. The bowel grew as usual and in order to find room for accommodation it was compelled to descend in a loop as shown in

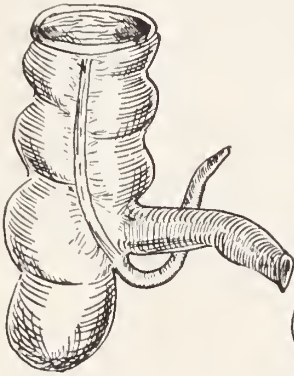

Fig. 8.

Atypical cæcum.

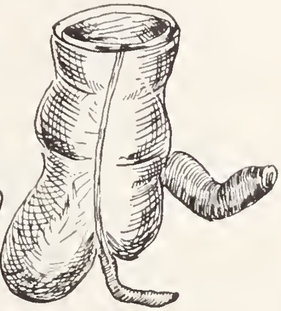

Fig. 9

Non-symmetrical cæcum, from case No. 10.

Fig. 8 (after author) illustrates an atrophic cæcum which occurs in 8 per cent. of subjects.

Fig. 9 (after author) shows a non-symmetrical cæcum which occurs in 40 per cent. of subjects.

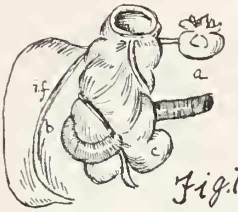

Fig. 10

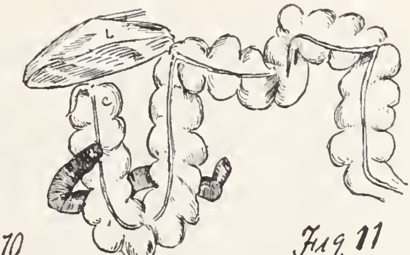

Fig. 11

Note.—The above percentages of the four types of cæca are from my own statistics from 130 post mortems.

Fig. 10 (after author) illustrates a partially descended cæcum showing a volvulus of three-fourths of a turn. The ileum enters the bowel by passing behind the bowel and finally entering from the front.

Fig. 11 (after author) represents a non-descended cæcum, where the ileum passes behind the loop of the descending colon and enters the bowel from the front.

the figure. Notice that the ileum not only passes behind the loop, but it enters the bowel from the right side and a little to the front. In this one case we see (a) non-descent of the cæcum; (b) the ileum passes behind the cæcum; but (c) we note a partial volvulus which is frequently the case in partially descended cæcum. Note the very same points; (a), (b) and (c) in Fig. 10. The partial descent of the cæcum is frequently accompanied by the ileum passing behind the cæcum and a partial volvulus, at least that is our experience in the above 130 cases. Figures 10 and 11 I sketched from the cases at the time the abdomen was opened. The factors which produce the unusual cæca are first, intra-uterine peritonitis, and second, the relation of the blood supply in regard to the size of either branch of the ileo-colic artery. Also the forcing and changing of the position of the cæcum by growth processes.

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Ingrowing nail, or ongle incarne, as the French call it, is, as is well known, a very painful affection, and unfortunately, the operation necessary for its cure is often dreaded by the patients, although local and general anesthetics are employed to render the avulsion as painless as possible. A very simple method has been frequently employed by a confrere with constant success. It consists in painting the offending portion of the nail with a warmed 40 per cent. solution of caustic potash. In a few seconds the upper horny layer is rendered so soft that it can be easily removed by a piece of broken glass used as a scraper. The application of the solution and the scraping is continued until nothing but an exceedingly thin portion of the nail remains, which can be easily removed by a small scissors. The patient can now be considered cured, without having lost a drop of blood nor felt any pain.—Paris Cor. Med. Press and Circular.

The Gazette hebdomadaire de medecine et de chirurgie, gives a summary of a history of a case, by M. Hornus. During an epidemic of mumps a soldier, twenty-two years old, presented himself with a double rochitis. It was not due to gonorrhœa, and he had never had the least venereal infection. It had come on after a few colicky pains followed by an abundant movement of the bowels. Both testicles were affected in an equal degree. The temperature was 103.1 degrees F. Topical treatment was prescribed for the orchitis, but as early as on the second day it was found that the patient had peritonitis, which carried him off in forty-eight hours. At the autopsy the testicles were found transformed into purulent collections with no longer a trace of seminiferous tubules. The spermatic cords were bathed with pus, which continued beyond the inguinal canal. The intestinal coils and the epiloon were covered with purulent and fibrinous deposits. There was nothing wrong with the other organs.—N. Y. Med. Jour.

Is the Recitation Method of Teaching a Success in Medical Colleges?[1]

By EDWIN FRAZER WILSON, A.M., M.D.,

Columbus, Ohio

Teaching in some form has existed ever since the creation of man. The Bible tells us that "God created man in his own image. Male and female created he them. And God blessed them, and God said unto them be fruitful and multiply, and replenish the earth and subdue it."

This is the first lesson of which I can find any record, and I want you to notice that it was in the form of a lecture. Primitive man was evidently an imitative being, and following the example that had been set for him, taught the succeeding generation in the same manner.

Thus the world went on, probably for ages, progressing slowly but surely until, in the time of the early Egyptian empires, the historical, legal and medical facts that had been accumulated were handed down from father to son from one generation to another. At this time all knowledge of the arts and sciences was confined to various members of the priesthood. As the art of writing had not then been discovered, there was no other and no better way of keeping these records.

The Greeks, at a later age, made another advance. They established schools. In these schools the teacher or master, as he was then called, taught by means of lectures, any who cared to enroll themselves as students. The master taught his followers whatever he had acquired in long study under other and older Greek masters, or from the priests of the Egyptians.

After the art of writing was discovered, a part, at least, of these records were transcribed to the papyrus rolls and then the teacher was freed from the necessity of committing all to memory. This was about the state of affairs at the first point of authentic medical teaching. The knowledge that had been obtained, through long ages by the priests had been corrupted in transmission, and could we now have access to the first rolls written by them, we would find the truth mixed up with a large amount of fiction.

The only thing left, therefore, for the first teachers was to cull out what there was good in these writings and supplement them with their own experiences. These were undoubtedly the first didactic lectures on medicine and other sciences. Notice that in this early age all teaching was of the same kind. There was, perforce, only one method. In time the printing press was invented, and books of all kinds became more numerous and more accessible. As soon, apparently, as the distribution became general enough, the other branches of learning began to be taught by means of recitations and text-books.

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[1] Read before the American Academy of Medicine, Baltimore, May 6, 1895.

Medical teachers, however, with the conservatism for which they have always been noted, still adhered to the old method of lectures, even down to our own times. In the olden times, a man to become a teacher or a master with a following of any strength, had to be a man of superior mind and attainments. Such men were Hypocrates, Galen, and others of the old masters. While the schools were few and the teachers were the master minds of the times, the lecture method was, without doubt, the best. But now, when the medical schools are scattered broadcast over the land, when all kinds and conditions of men aspire to the chairs of said colleges, and when the old conditions do not apply at all, shall we still stick to didactic lectures, or will the recitation method give better results? Why, when we can obtain, in text-book form, the teachings of the best medical minds of our times, do we not give the student the advantage of these teachings direct? Why have these teachings garbled and weakened by being passed through the hands of an inferior lecturer? The theory, of course, is that the lecturer will read and absorb the best from all sources, and then in the lecture give the students the result of his accumulated knowledge, along with any personal experience he may have had. The theory in this case, as in many others, is all right, but will it work in practice?

Any of you that may have heard lectures given in the smaller or more obscure schools, will recognize at once the point I am trying to make. The Academy has for its avowed object the higher education of the medical men of this country; the raising the standard of our profession. It seems to me that all the work thus far has been done in the way of preliminary education. This is all right and as it should be, but should we not devote some time to the medical teaching also?

With the short two years' course the recitation method would have been impracticable and impossible. Now that we are to have a four years' course, it would seem to be the logical way of teaching. Having been for two years connected with a school where the recitation method is used, I feel qualified to speak as to the success of the experiment.

I remember very well when attending lectures at the University of Pennsylvania, that we would take notes on our lectures and at night read them over, and sometimes also read over the text-book that was recommended on the same subject. We would go, on one or two nights a week, to the quiz that was held by a quiz master, not connected in any way with the school perhaps, but who had been quizzing on that branch long enough to give us points how to pass examinations. I had entered the medical school just after finishing a classical course at college, where he had lessons assigned us and were expected to know them, and I am sure that, with lessons and daily recitations, I did more hard work in one week that I did in the whole term of lecture work. I have watched the students carefully for the past three years in this recitation school, of which I have spoken, and I have never seen medical students work as hard as they have. I do not believe that in this matter we should go too far to the extreme and cut out lectures entirely. Some branches certainly can be taught better by means of lectures. Anatomy I should teach by lecture with the subject before the class, with a quiz by the teacher, once a week. Medical diagnosis should be a combination method of bedside lectures and text-books.

Most of the work, though, can be done by recitation from a text-book from assigned lessons. With a four years' graded course, I consider the teaching by recitations in medical colleges a success. It will prove as much of an advance in medical teaching as it has in other branches. The general adoption of this plan will, I believe, hasten the time when a medical course will take its proper position as a post-graduate course in our colleges and universities, and will thus call for a better preliminary education of the man intending to enter the medical profession.

As it is now, all of our classical and preliminary work is done in schools teaching from text-books and recitations. The student enters a medical school and the method of teaching is entirely changed. He is placed at a disadvantage, in so far as he has to accommodate himself to taking notes on his lectures. Generally he is not a shorthand writer, and in his frantic efforts to keep up with the professor, he will either have to have a remarkable memory, or it will take months of practice to enable him to grasp the main points of the lecture. Take the note book of the average medical student and what does it amount to? It is a book that the Professor would not want to have published as the lectures of Professor Blank on the subject of medicine, surgery, or whatever the branch may be. By the time the student has learned the new method, and is able to take notes with some success, the course is at an end and he has missed more than he can ever know in his endeavor to take notes on lectures.

If, on the other hand, he is taught from text-books and by recitation, he is only applying the methods of study he has already learned to the advanced study he is now making. Assign him a lesson, be it ever so long, and he will read it over, and if he has had the advantages of a college education, or of good preliminary training, he will at once grasp the main points and be able to fix them in his mind. Then, if the teacher has anything to add, either from his own experience or from his more extensive reading, the student can make a note of it and know what it means. He is only taking another step upward in his education, applying what he has already learned, namely how to study.

If the recitation method in classical work is the method, par excellence, why should it now be the best method in medical teaching? Logically it seems to me that it should be, and as far as I have observed it in practice, it has been a decided success.

I wish also to say a few words about the teacher. In lecturing, the lecturer can make almost any statement he cares to and the students either overlook it or forget to ask anything about it—if they ever get a chance. Not so with the recitation method. The student has a chance to ask for explanation of any statement he may not understand. He can ask for authority, and thus look up any matter of special importance.

The man who undertakes to teach medical students by the recitation method, if he would be a success, must be one well read, a hard student, and one who thoroughly prepares himself for each lesson. He must answer any question the class may ask, and if he cannot do that on the spur of the moment, must look it up and answer it in the next lesson.

With such men in a school, I would say that the recitation method of teaching medicine is a success and is the best method for the following reasons: First—We get more and better work out of the students. Second—By keeping the text-books up to the latest edition the students get the latest and best teaching of the master minds of the profession. Third—There is no break in the method of study and there is no time lost in learning a new way. Fourth—The work that can be required will necessitate a better preliminary education. Fifth—Its general adoption will, I believe, in time put medical education where it belongs, as a post-graduate course of our universities and colleges. Sixth—Since the recitation method has proven itself to be the method in other branches, that it will prove equally successful in medical teaching; and that, by its general adoption, it will accomplish that at which each Fellow of this Academy aims, the elevation of the medical profession by the higher education of its individual members.

ANALGESIA AND SEDATION.

An Essential Adjunct to Treatment.

By JOHN J SULLIVAN, M.D.,

New York

Pneumonia in recent years is so frequently accompanied by symptoms of grippe that the treatment, to a great extent, has been modified or changed. The essential features in the result desired are a diminution of the pain and a lowering of the temperature. Opinions differ as to whether a reduction of the temperature influences the course of the disease, but a conçensus of opinion is that antipyretic treatment is distinctly called for in the beginning, and an analgesic at all times, if needed to assuage suffering. The antipyretic should be antikamnia, and the analgesic is supplied by codeine and antikamnia together. This is given every three or four hours in tablets containing 4¾ grains antikamnia and ¼ grain codeine, throughout the period of congestion and consolidation. Where there is great restlessness, this will have a delightful effect.

The nocturnal pains of syphilis, the grinding pains which precede labor, and the uterine contractions which often lead to abortion, tic douleureux, brachialgia, cardialgia, gastralgia, hepatalgia, nephralgia, and dysmenorrhœa are afforded immediate relief by the use of this combination, and the relief is not merely temporary and palliative, but in very many cases curative.

The neuroses of the respiratory organs, are also greatly relieved by the use of this combination. A paroxysm of asthma is sometimes cut short by a full dose; hay-fever or autumnal catarrh is benefited by its use. In the harassing cough of phthisis, or in the pain of pleuritis, in the painful sensations accompanying bronchitis when the tubes are dry and irritable—as they usually are—the blending of codeine and antikamnia will not be found wanting in its action, but will give results that are gratifying to both the patient and the medical attendant. As a producer of sleep it will be found efficacious. This is doubly true when there is great nervous excitement, and also, in pulmonary diseases. This combination is worthy of trial. It is a sedative to the respiratory centers in both acute and chronic disorders of the lungs. Cough in the vast majority of cases is promptly and lastingly decreased and often entirely suppressed. In diseases of the respiratory organs, pain and cough are the symptoms which especially call for something to relieve; this tablet does it, and in addition controls the violent movements accompanying the cough, and which are so distressing.

In diabetes this combination is superior to any other in diminishing the quantity of sugar in the urine, and also in diminishing the quantity of urine itself in diabetes mellitus. The bulimia and polydipsia are lessened by its use, and probably the changes in the nervous system which accompany or are causative of the disease, are arrested or prevented. It also prevents waste. It controls restlessness; it relieves insomnia; it relieves distressing nervous symptoms. It relieves the craving of the stomach, and lessens the frequency of the calls to urinate. It is not claimed that it will cure diabetes mellitus, but there will be in many cases, arrest of the disease, with prolonged periods of good health, and cure in some cases.

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It is much the fashion to continue to belittle great men, even among ourselves—an evil fashion, truly. While a great mountain looks comparatively small at its base, a few miles of distance causes its head to stand far above its fellows. Thus the name of Marion Sims will look when a few more decades have passed over medical history. It will be prominent when some of those who would make light of his achievements are utterly forgotten.

What Dr. Sims did for American Surgery is that which Mott and Pancoast and Bigelow and Sayre and others also have done for it. They made it known and respected abroad. "Who reads an American book?" was once a severe and serious taunt. In the same way, "What great surgeon has America produced?" might once have been asked. That we have answered in the last fifty years by producing so many, that he who denies the greatness of American surgeons, simply writes himself down as an ignoramus.

Besides making American surgery known and respected abroad, Dr. Sims promoted independence of thought and self-respect in the American profession, so that there was a sensible advance in our willingness to do things on our own account, without reference to the French, the German, and the English. It is not a very long time since it was a great achievement for an American to edit an English book, or to translate a French one. We now leave editing and translating to very young men, while original medical and surgical productions are to be found on every hand in our own country and are widely read abroad. All honor to the memory of Marion Sims!—Post-Graduate.

SELECTIONS.

LEPROSY.

A. W. HITT, M. D.

India.

What we now recognize as separate and distinct diseases have been described by ancient writers under the term "Leprosy." We are indebted to the Bible for the oldest record of leprosy.

The Bible mentions a person as "a leper, white as snow." This case would not be classified to-day as a case of leprosy, but as leucoderma. On the other hand, the Bible gives a very good description of anesthetic or nerve leprosy, in the twelfth chapter of Leviticus.

Many prominent men have died with this loathsome disease. The Talmud says, "The Lord smote Pharaoh, King of Egypt, with leprosy. The disease was exceedingly grievous and the King suffered inexpressible agony." In conversation with an intelligent Egyptian, who was well versed in the history of his country, I was told that Rameses IV. was the king referred to.

It was said that Moses had leprosy, and Manetho states that 90,000 leper Jews went out of Egypt with him. Josephus discredits the idea that Moses was thus afflicted.

I believe that Job at one time had leprosy. He speaks of scraping himself with a "potsherd," and says of his sufferings: "When I lie down I say, 'When shall I arise and the night be gone?'" And again "I am full of tossing to and fro till the dawning of the day, and my flesh is clothed with worms and clouds of dust. My skin is broken and become loathsome." And of his friends, he says, "They abhor me and flee from me, and spare not to spit in my face."

King Uzziah and Naaman, the Syrian captain, also had this loathsome disease.

Robert Bruce, King of Scotland, died of leprosy in 1392.

I mention the above cases to show that it is not a disease limited to the poorer classes only. The rich suffer from it as well as the poor.

The ancients regarded Egypt and the valley of the Nile as the home of leprosy.

Isadore of Seville (A. D. 582) speaks of leprosy being in Spain. During the reign of Louis VIII. (1226 A. D.) there were 2,000 leper asylums in France, while the number of asylums in all Europe was estimated to be 19,000.

Twenty years before Columbus discovered America, there were 112 leper asylums in England.

MacNamara says a leper asylum was established in Canterbury, England, A. D., 1096. Segregation had almost driven it out of England.

Sir J. Y. Simpson gives an interesting account of how lepers were banished from London during the reign of Edward III. The leper was looked upon as a dead man, and the church performed the solemn ceremonials of the dead over him on the day on which he was separated from his fellow creatures. He was from that time dead to law and legally buried, though still alive and breathing. The priest first went to the house and conducted a part of the ceremony. The leper was sprinkled with holy water and was then led to the church where he was clothed in a funeral pall, and while placed before the altar between two trestles, the Libera was sung and the mass for the dead was celebrated over him. He was then given a special dress, and a pair of clappers so that he could warn the people not to come near him.

This is quite a contrast to what I saw daily in India: men sitting by lepers, eating with them, and dipping up water to drink within a few feet of where lepers stood washing themselves and their dirty loincloths. A barber called at our house and after cutting a friend's hair asked me if I wanted to be shaved. I told him "No." He then asked for medicine and when I examined him, I found he had leprosy.

During my travels in various parts of the world, I have found leprosy in almost every place I have visited. I can safely say that no part of the world has escaped this dreadful scourge, save a few of the islands in the ocean. Even Iceland was included in the list as far back as any of our writers can remember. In 1652 a leper asylum was established in that country.

India, China, the Sandwich Islands, and the different districts of Africa suffer most from it.

Some people believe that there are 250,000 lepers in India, while MacNamara, who is one of the leading authorities on leprosy in India, says there are 128,089 in British India. There were 6,614 in the district in which I lived.

China is said to have almost as many lepers as India, but owing to so much of the country being closed to foreigners, it is next to impossible to get or give any correct information.

Dr. Hillerbrand, who has been practicing in the Sandwich Islands since 1851, says that there were doubtful cases as far back as 1848, but the first well-authenticated case was reported in 1859. It was introduced by the Chinese, and as there was no word for it in the Kanaka, the natives called it "Miapake," or Chinese disease. There is now one leper to every thirty healthy natives in these islands. The leper asylum on Molakai in 1890 had 1,159 lepers in it. There are now about 1,500 in this asylum.

Our own fair country has a fair sprinkling of it, there being 522 cases now in America. Only a few weeks since two lepers were discovered in the country above Cincinnati, Ohio.

For quite a long time two types of leprosy have been recognized: the tubercular and the nerve type (generally known as the anesthetic form), which when combined, form a third, known as the mixed type of leprosy. The same bacillus causes both forms.

If the bacillus finds a home and can develop in the corium, we will have as a result, tubercular leprosy; but if the bacillus does not attack the corium and reaches the nerves of the extremities and face, we find nerve or anesthetic leprosy. In other words, I believe that the type of the disease is determined by the channel through which the bacillus enters the body. Should it be deposited in the skin, especially in a weak place, and remain undisturbed, tubercular leprosy would follow.

SYMPTOMS.

Nerve or Anesthetic Leprosy.—Generally the patient has several feverish attacks and the whole constitution seems to be disturbed. This is not always the case, but, generally speaking, among the lower, ill-fed classes, this will hold good. The first symptom which attracts the attention of the patient is a tingling or burning sensation in patches on the different parts of the body. The backs of the hands and the forearms are generally the parts which are thus attacked.

Lancinating pains along the course of the nerves are next noticed, and the color of the integument changes. In some cases, it becomes darker; in others, the skin pigment is diminished and the part becomes lighter than the surrounding skin.

Pemphigoid eruptions are commonly noticed. An erythematous rash appears over the affected parts. The pimples vary in size from that of a lentil to a pea. These patches gradually fade and the epidermis shows a tendency to desquamate after the drying up of the eruption. These spots spread peripherally and begin to fade first in the center. The complete cessation of perspiration from the surface of these spots is very important as a diagnostic point. Pilocarpine will not affect these spots. In some cases these spots are delayed and do not appear until after the disease has been in the system for ten years. The destruction of the nerves disturbs nutrition and the sense of feeling. Soon the most distressing part of the disease shows itself and the extremities and face are mutilated. The nose sinks in and leaves a ghastly looking patient whose face you can never forget. The fingers and toes become crooked and ankylosed. The phalanges either drop off or become absorbed and disappear in this way. The hair drops out in tubercular leprosy, while it becomes white in the anesthetic spots of nerve leprosy and does not always fall.

There is great pain about the eyes, nose, cheeks, mouth and limbs. After months or years of suffering, the pain ceases and anesthesia supervenes. An eye can be cut into at this stage without hurting the patient. The patient's health fails after years of suffering, and he becomes anemic, and visceral complications arise. Amyloid degeneration of the kidneys and liver, with chronic diarrhœa, finally put an end to his suffering and miserable existence.

Tubercular Leprosy—As in the anesthetic form, we find fever and a general breaking down of the constitution in the first stages of tubercular leprosy. When the disease is well advanced, the tubercular or nodular masses on the face, with the greasy, shining appearance, causes the patient to look simply frightful. This is the leonine appearance (leontiasis) as commonly noted by both ancient and modern writers.

If you will pardon me for mentioning elephantiasis here, I will say it seems strange that these two powerful and destructive diseases should be in appearance so much like the two most powerful and destructive animals of the country in which they prevail, that the name "leontiasis" from the resemblance to the lion, and "elephantiasis" from the resemblance to the elephant, should be given them. Leprosy, like the king of beasts (the lion), is the king of diseases, and is the most destructive disease known, so far as mutilation is concerned. And as the immensity of the elephant, or, if you will pardon me for using the expression, this great exaggeration of animal life, impresses you on first seeing it, so the immensity or apparent exaggeration of the disease impresses one when he first sees a well developed case of elephantiasis.

Another point which to me is very interesting: Only a short distance from our place, is a town (Ruttenpore) which is noted for two things: first, the great number of cases of elephantiasis; and second, the large "tulahs" or artificial ponds. Ruttenpore was for centuries the capital of this district, and native kings or Rajahs had great herds of elephants here. The elephants were washed and bathed in these tanks daily, and the natives now say that every person who bathes in one of these tanks is sure to have elephantiasis; while in the neighbering tanks where no elephants were bathed, the water is pure. If you ask a native some distance from this place, if he has ever visited Ruttenpore, he will, as a rule, reply, "Yes;" and add, "Ruttenpore admi ha thi pau ka mawfik," (Ruttenpore men have feet or legs like the elephant). This is the natives' belief about the matter. I leave you to judge as to where there is any connection.

Thin says, "When the parasite has established itself in the skin, the first effect (before there are any changes observable to the eye) is to set free a poison, which produces more or less marked results in different individuals, causing the so-called prodromata or premonitory symptoms of leprosy. After a time the multiplication of the parasite causes a vaso-motor paralysis of the parts in which it grows, producing the exanthem of tubercular leprosy.

"The further development of the bacillus leads to direct changes in the corium itself, causing swelling, thickening, infiltration and discoloration, which vary according to the extent and rapidity with which it grows. This forms the so-called tubercular stage. The breaking down of connective tissue and the destruction of blood vessels produced by this excessive growth of bacilli, lead to ulceration—the ulcerative stage of tubercular leprosy. Finally comes a time, when in most cases, the bacillus leads to leprous deposits in the liver and spleen, and the patient becomes exhausted by the constant discharge from the ulcers and by visceral complications, to which he eventually succumbs unless, in the meanwhile, he has been suffocated by the leprous growth in the larynx, or has died of some acute intercurrent malady."

PATHOLOGY AND BACTERIOLOGY.

The Bacilli Lepræ have been found in the cells of almost all the tissues of the body in persons affected with leprosy, but it is in the cells of the diseased nerves and skin that the bacillus will be discovered in the greatest abundance.

In the early stages of nerve leprosy, the bacilli first grow within the cells forming the sheath of one or more of the nerves, most frequently the ulnar nerve.

The Lepra bacillus resembles that of tubercle; in length it is about one-half to three-fourths the diameter of a human blood corpuscle. The Lepra bacillus multiplies by fission. As it has not been found free in the blood, it is doubtful whether it will live outside the cell wall.

Danielssen and Boeck give a good account of the changes visible to the naked eye. The epidermis is found normal in a section of tubercle which has not softened, and from the slightly firm corium a little viscid fluid can be expressed. The cut surface is granular, yellowish white, and a substance having this color can be squeezed out of it. The subcutaneous tissue is infiltrated and thick, and a lardaceous mass, which is often gelatinous, adheres to the corium. The skin becomes gradually thickened, the tubercle very rarely extending to the subcutaneous tissue, which does not soften with the rest of the tubercle. The vessels and nerves in the diseased tissue become thickened but resume their normal condition on passing into healthy tissue.

About the only difference of consequence, pathologically, between the types of disease is that the nerves are affected in nerve leprosy and the skin in the tubercular leprosy.

DIET.

Almost every article of diet has been accused of causing leprosy. Mr. Jonathan Hutchinson believes that fish will cause it. Lepra bacilli have never been found in fish, either fresh or dried. I, therefore, cannot believe that fish alone will produce leprosy. But I will say I believe that a fish diet is often a very important factor in the causation of leprosy, by preparing the soil for the seed.

We know that there are many people in the United States who cannot eat fish or strawberries on account of the unpleasant skin eruption which they produce. We know that when the skin is diseased and broken, the Lepra bacillus will find it much easier to enter the human economy than if it were healthy and unbroken. It would be just as correct to say that a fish diet alone would cause it. Men who have itch are more likely to have leprosy than are healthy men, simply because the skin is broken.

In this connection it might be well to mention the fact that, while a fish diet will have little effect on leprosy, a mixed diet of fish and milk will cause the disease to increase and the ulcers to enlarge rapidly.

VACCINATION AND ITS RELATION TO LEPROSY.

I believe that leprosy is contagious as syphilis is contagious, that is, by inoculation in some way or other. The Lepra bacilli must be transferred from the infected to the healthy person. This, I believe, can be done in several ways.

I will speak first of a few cases in which the disease has been produced by inoculation.

1. A European Sister of Mercy, who was sent to Guiana, was infected by being pricked with the needle with which she was sewing lepers' clothes.

2. A European child free from taint, while playing with a native child who was a leper, saw him stick the blade of a pen-knife into the anesthetic part of the leg without experiencing pain. The European child took the knife from the native and tried the experiment on himself, but of course suffered from it. He afterward became infected and died with leprosy.

3. Kenu, a condemned murderer in the Sandwich Islands, was given his choice by the Queen, of being inoculated with leper lymph or being hung on a certain day. He consented to be inoculated and this was done by Dr. Arning. Within two years he was a confirmed leper. He died with leprosy in about six years.

I believe it is an accepted fact that leprosy can be inoculated and that in this way it has increased and will continue to increase at a fearful rate until arm-to-arm vaccination is abolished.

General arm-to-arm vaccination has been practiced in the Sandwich Islands for years. Within the last few years leprosy has made a fearful advance there, from the time when no one had leprosy (1858) to the present day, when we find one-thirtieth, and some say one-tenth of the population infected with it.

Two years after a general vaccination took place there in a district which had been remarkably free from leprosy, from fifty to sixty cases were found. Cook estimated that the population of these islands one hundred years ago was about 400,000, to-day there are less than 18,000, fifteen hundred (1,500) of whom are now in one leper asylum.

The vaccinators in India are ignorant men and unable to diagnose a case of leprosy or skin disease of any kind if they should see it. They never examine the people, and vaccinate all they can corner or catch up. Lepers are often included in the first, and lymph is taken from their arms and healthy people vaccinated with it, as the following case will show:

A leper named Munorita, thirty-four years of age, residence Koth, near Ranikhet, has had leprosy twelve years. Was vaccinated since he had leprosy. He was examined when he was vaccinated. Others were vaccinated with the same knife before it was cleaned. Later on lymph was taken from his arm and others were vaccinated with it.

It is useless to take up more time with this sad story. I claim that leprosy is being spread by the lancet and can confirm what I say. Gentlemen, it is time for the physicians of these countries to call a halt before this curse reaches around the world and knocks at our own doors. If the profession will not take up the fight for right, who that can remains to do so?

The natives of India object to having their children vaccinated for two reasons: First, because they have seen so many of them die after the operation, while others were wrecked for life and would have been far better off in their graves. About 6,000,000 people were vaccinated in India last year, and God alone knows how many of those poor creatures will have leprosy or some other trouble later on.

There is another reason why they object to it, and that is because they say a child is to be born who will be their king, and who will free them from the hands of the English. The blood of this child will be as white as snow. The English in some way discovered their secret, they say, and commenced dipping into the arms of all the children to find the white-blooded child. If it is found, it will be put to death.

I believe vaccination is a blessing when carried on right, but it is surely a curse as now practiced in India and some other countries.

DURATION.

The average life of a man suffering with tubercular leprosy is about 9½ years, while with anesthetic leprosy they live about 18½ years after contracting the disease.

TREATMENT.

It would be impossible for me at this time, to speak of all the drugs that have been used in the treatment of leprosy. Chaulmoogra and Gurjun oils have been used by most every one who has anything to do with leprosy, but so far these oils have failed to cure. Arsenic is considered by some to be good. Danielssen used iodide of potassium for over 40 years in the treatment of leprosy, with a marked degree of success.

There are no two cases which we treat alike. Ten per cent. solution of pyrogallic acid painted over the anesthetic spot often does good and the anesthesia disappears. I pay very little attention to the ulcers other than to keep them clean, as I believe to heal them by a local application alone will do more harm than good. As in other diseases of this character, an alterative is indicated. As an alterative I generally use the elixir iodo-bromide of calcium compound (Tilden's), as the calcium salt is much better tolerated by the stomach and is prompter in its action.

If the ulcers are slow about healing, I generally pack them with equal parts of acetanilid and sulphate of quinine. Ichthyol has been used by some, but after trying the various remedies I think the treatment outlined will give better satisfaction than any other. We can heal ulcers, stop the most distressing symptom of the disease, mutilation, and place the patient in a fairly good condition.—Medical and Surgical Reporter.

THE USE OF NOTES BY PHYSICIANS.

It is a general rule in commercial circles, that where a person applies for credit about whose financial standing there is any doubt whatever, and where the usual rule of the business is to extend time, for example, thirty or sixty days, that the applicant for credit is informed that he can be accommodated for that time, provided a note be given for the amount of the merchandise, etc., supplied, signed by the applicant and endorsed by some one known to the creditor to be a responsible person himself. This practically means that if the applicant does not pay the account upon maturity, the endorser binds himself to do it at that time, and is practically equivalent to selling the goods directly to the endorser, as far as the creditor's interest in the case is concerned. In another class of cases, the debtor finds himself unable to meet his obligations as they become due, and he needs to seek for an extension of time from his creditors, possibly to avoid failure. Here the creditor may agree to grant an extension for some reasonable and specified time, provided the debtor is able to give a note, bearing an acceptable and satisfactory endorser. These notes always bear interest. If the note is forthcoming, and the endorser is satisfactory to the creditor, the extension is granted, and failure possibly prevented.

In either case the account is secure, because the endorser of the note is known to the creditor to be a thoroughly responsible person, and one who is able to meet all his obligations as they mature. These notes are usually discounted by the creditor's bank and are practically used as so much cash.

This is probably one of the wisest and most general safeguards in business that can be adopted or accepted in lieu of actual cash. If these notes are not paid upon maturity by the debtor, demand is made upon the endorser for payment, and, unless he responds or acquiesces at once, suit is brought against him. The particular feature about a note, even one without an endorser, is this, that if it is not paid upon maturity and suit is brought for recovery on it, the legal action necessary is more simple and effective than on an open account, because a note in itself is prima facia evidence of the debt, whilst an open account may be disputed, and a jury trial be necessary to establish its amount. There is even a possibility of the creditor being unable to prove his claims, and being non-suited and losing all.

Having gone into the subject from a strictly commercial standpoint, we now wish to point out to our readers why, when, and where a note should be used by a practitioner:

In medicine, more than in any other profession or line of business are long credits the rule. It will not be the purpose in this article to discuss credits, when and how they should be extended—that will be done in a future article—but simply to give an idea how to make the best of a credit after it has been given.

Frequently the circumstances of a person after a long illness are such that he is unable to pay cash for the services rendered, even though perfectly willing to do so if it were only possible, or to make arrangements guaranteeing future payment, if such a suggestion were offered. The practitioner knowing these circumstances has no wish or desire to receive immediate payment, and may not be averse at all to the extension of a long credit.

It may be perfectly agreed and understood by the patient and the doctor, that payment is to be made at some future time. But suppose that subsequent circumstances should render the patient so ungrateful as to deny the debt entirely, or either party to the agreement should die. In the former case, if a note were secured it would be an impossibility for the debt to be denied, and perhaps costly litigation would be avoided, and in the latter case, if the patient died, the note could be filed against the estate without fear of dispute. If the physician died, the note could be collected by his heirs, and be an actual asset of the estate.

How frequently have practitioners died and left their books and accounts in such a loose shape that practically nothing could be realized on open accounts by the heirs.

From any standpoint whatever, a note is the best possible thing to secure, where an actual settlement of the account is impossible.

After a note has been secured do not surrender its possession to the debtor or endorser, only upon payment.

If you do not care to have it bear interest, scratch out the words—with interest.

Notes, as a rule, are outlawed at about the same time an open account would be. In New York, New Jersey, Connecticut or Pennsylvania, a note is outlawed six years from its date, or the date of the last payment. Therefore, if by any possible chance your note should run six years without having a payment on it, have it renewed.—Phys. Alliance Monthly.

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The rheumatic nature of chorea formed the subject of Sir Dice Duckworth's paper read before the Eleventh International Medical Congress, held in Rome last April. The author cited numerous instances in which there was absolutely no difference between rheumatism and chorea, and claimed that it was impossible to distinguish either during life or after death any difference between endocarditis due to rheumatism and that which is supposed to be due to chorea. The various causes assigned for the production of chorea, such as shock, mental overwork, or physical emotion, he said, could only produce the disease in those who had inherited rheumatism, and as the manifestations of rheumatism were now very properly recognized when occurring in other parts of the body besides the joints, so he concluded that chorea might be considered as a variety of rheumatism specially affecting the brain.—Am. Therapist.

Dollinger (Centralbl. f. Chir.) describes an operation for the subcutaneous extirpation of tuberculous lymph glands in the neck and submaxillary region. The posterior half of the scalp having been shaved, and the whole of the scalp and the skin of the affected side of the neck carefully disinfected, an incision is made commencing behind the external ear, and carried in a curved line with the convexity backwards and downwards toward the middle line of the neck behind. The skin and superficial fascia are divided, and the anterior and lower flap is undermined by finger and elevator until the enlarged glands are reached; these, if they have not broken down or contracted firm adhesions with surrounding soft parts, may now be readily detached by the elevator and drawn through the wound. The skin forming the lower flap is so yielding, especially in women and children, that it is possible by this operation, the author asserts, to reach glands situated near the chin, and even those in the supraclavicular region. The wound, when made under strict antiseptic precautions, heals quickly, and the scar is hidden by the new growth of hair.—Brit. Med. Journal.

ABSTRACTS.

The Contagiousness and Control of Leprosy.

BY JAMES C. WHITE, M.D.

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It will be well to consider first what should constitute the proof of the contagiousness of a disease.

This should be based upon the following points:

(1) The history of its action upon communities or nations.

(2) The study of its action upon individuals.

(3) Its resemblance to other affections generally regarded as contageous.

(4) The establishment of a satisfactory cause of such contagion.

(5) The influence of control upon its history and course.

Let us apply these test questions to the disease we are considering.

I.—THE HISTORY OF ITS ACTION UPON COMMUNITIES AND NATIONS.

You know as well as I the history of its course in Mediæval Europe. Introduced from the East, the boundless home of so many scourges, it became a pestilence of so overwhelming proportions, that no influence of heredity alone could possibly account for its spread. Many thousands of lazarettos were erected to care for it, and the sternest laws enacted to control it. Belief in its contagious nature was then universal. It lingers yet in by-places and border districts of Europe, whilst in its old seats in the Orient it still plays havoc with mankind. In India, it is estimated, there are two hundred and fifty thousand lepers to-day.

This glance backwards shows us how prone are the human tissues to the inception of the disease under favorable conditions, without distinction of race. But it is in the history of its introduction and course among virgin nations in our own day that this subject may be best studied. The extraordinary rapidity of its spread in the Hawaiian Islands can no more be accounted for on other grounds than its infectious nature, than can the appalling ravages of measles among the people of the Faroe Islands when first imported thither. And in still smaller communities this method of dissemination is even more strikingly illustrated, as witnessed in New South Wales, in Parcent, Spain, in Cape Breton, and in its revival in Louisiana.

II. THE STUDY OF ITS ACTION UPON INDIVIDUALS.

Extraordinary difficulties stand in the way of the settlement of our question by a positive demonstration of its capabilities of transference from person to person on account of its long period of incubation. We expose a person to the emanations of variola, and we see the result in a few days; to contact with another infected with syphilis, and the results declare themselves in a few weeks; to contact with the materies of tuberculosis, and the effects may be apparent in a few months; but with leprosy we have reliable data to prove that the disease may not declare itself for years, two, five, or even ten, after a person has been exposed to its influence. Such a retardation of the tangible effects of contagion renders direct historical proof in individual cases almost an impossibility. Again, the tissues of other animals than man, already tested, show themselves utterly indifferent to inoculation experiments, so that we get no response to such methods of investigation. Let us hope ere long some animal as susceptible to the bacillus of lepra, as is the guinea-pig to that of tuberculosis, may be discovered. The possibilities of using human tissues for such a demonstration in satisfactory sufficiency is too remote for serious consideration. It is true that such experiments have been made. I have seen it claimed that thirty-six persons in Norway and Italy were formerly inoculated and without result, but I am unacquainted with the details of the experiments, whether active bacilli were employed or not, and do not know how long these persons were kept under observation subsequently. The results were simply negative, and therefore without positive value. Who knows that the artificial inoculation of syphilis conducted in the same way might not result in similar failure. Consider the history of such experiments with favus. Before a certain date attempts to transfer the disease from one host to another at will were almost always unsuccessful. Now that we know how to do it, this is accomplished with certainty. One inoculation practised by a competent person and in a proper manner of recent date has, as you know, been followed by leprosy. You are all familiar with this experiment of Arning at Hawaii—how pus from a leprous ulcer containing bacilli was injected into the skin, and a bit of leprous tubercle was transplanted into the arm of a condemned criminal, who was then isolated; and how three years subsepuently leprosy declared itself, and progressed to full development. Unfortunately the experiment cannot be considered absolutely conclusive, as the victim might have been infected beforehand. But it is not likely to be soon repeated.

We must rely, therefore, upon data of clinical nature for our evidence. We shall find this partly in a careful study of the beginnings of endemics of the disease in small communities, as in that of Louisiana, Cape Breton, and Trecadie, as detailed by myself elsewhere; in the reports of Hawaiian physicians of its dissemination throughout those islands; in the account of its recent importation into a small village in Spain, by Zuriaga. Another class of evidence is that of the acquisition of the disease by immigrants of non-leprous nationality into leprous countries, but of this there are so many instances on record that I need only allude to it. More important is the fact of the frequent development of the disease among the personal attendants of non-leprous stock upon lepers. I will mention a few such instances of recent occurrence. A nun, and a ward-tender in a Guiana lazaretto became lepers. In Russia three clergymen from healthy districts became infected after removing to leprous districts and associating with lepers. In Bergen two ward-tenders have become lepers. In New Orleans a priest has acquired the disease. In Hawaii twenty-five white residents are lepers, of whom two are physicians, and three priests, and Father Damien, at last. Who would for a moment think of explaining such occurrences in hospitals for syphilis except through contagion? The case of Father Damien alone, to cite the one best-known example, is enough to establish the contagious nature of the affection, and to outweigh limitless data of a negative character.

III. RESEMBLANCE TO OTHER AFFECTIONS GENERALLY REGARDED AS CONTAGIOUS.

There are two diseases to which leprosy bears a strong likeness, namely, tuberculosis and syphilis. All three of them are still mighty scourges of the human race, and prevail over all parts of the earth. Two of them have had periods of intensified activity within historic epochs in Europe, raging as vast national epidemics. The other has done its fatal work uniformly and incessantly, never exhibiting such extraordinary and spasmodic effects as to deserve the title of pestilence. They are slow in their development and course, and their effects upon the cutaneous tissues are manifested by the most pronounced lesions the skin is capable of exhibiting. They affect nearly all the other structures of the body as well, showing respectively predilections for special tissues, and eventually profoundly impress the whole economy. The anatomical changes in the cutaneous tissues produced by them, although not identical, are sufficiently analogous to have been placed in one group by pathologists, before the similar causative element of the same had been demonstrated. Their strong resemblance to each other suggests an intimate relationship in etiology and pathology.

IV. ESTABLISHMENT OF A SATISFACTORY EXPLANATION OF ITS CONTAGIOUSNESS.

With the discovery by Hansen of the bacillus lepræ, the cause of its contagious nature was demonstrated as clearly as was that of tuberculosis earlier by the similar discovery of Koch. That of syphilis remains to be conclusively established. That this has not yet been accomplished in no measure invalidates the presumption that it will be. We simply await the requisite knowledge of reagents. This will surely come, and then we shall have completed the proof of the close analogy of these three great diseases in all points.

Leprosy is pre-eminently a bacillus disease, for this organism is found in rich abundance in human tissues—chorium, mucous membranes, nerves, blood-vessels, ovary, testicle, glands, and the great organs; in the blood, lymph, tears, saliva, nasal and intestinal mucus, milk, vaginal secretions, the discharges of ulcers, and all cutaneous lesions, excepting those secondary to nerve changes. Could any infectious material be more generally or favorably distributed for direct transference to other hosts? How can any one who admits the infectious properties of the tubercle bacillus reasonably deny the same quality to that of leprosy, or seek a more rational explanation of its extension among mankind? And although we have yet to learn how to make pure cultures of bacillus lepræ, as we can with that of tubercle, as well as to discover an animal as responsive to its action as is the guinea-pig to that of the latter, yet our ignorance upon these points with regard to the infective materies of that still more contagious third affection, syphilis, is still more profound as yet. Should we ask in these days more substantial proof of the infectious, or contagious, or inoculable character of any affection than the demonstration of its bacillus nature?

V. INFLUENCE OF CONTROL UPON ITS HISTORY AND COURSE.

Let us now consider what has been the effect of the opposing opinions held from time to time by our profession concerning its contagious character upon its course among civilized nations. You know as well as I the views with regard to its unclean and infectious nature among Biblical nations and in Mediæval Europe. How the leper was segregated, regarded as a moral monster, forbidden to pass through public ways without a special garb, or bell, or clapper, and how the monks in charge of lazarettos were obliged to wear upon their breast the red letter L. In later centuries when the disease had been thus controlled and confined to a few European districts, the belief grew up, chiefly through the conclusions of Boeck and Danielson in Norway, and the reports of physicians from various regions, mainly of negative character, collected by Virchow and the English College of Physicians—that it was not contagious, but was endemic because hereditary. Scarcely any one thought of questioning this dictum. At the meeting of the first International Medical Congress, held at Philadelphia in 1876, I called attention to the prevalence of the disease in the United States to a greater extent than was generally known, and again in 1882, I presented a paper upon the subject to the American Dermatological Association. My conclusions that the disease was increasing to an alarming extent in this country, and that it was contagious, found then but few supporters among my colleagues. Since then professional opinion has greatly changed. You have heard just now from Dr. Hyde how many important foci of the disease lie within and close around our borders. You know the story of Hawaii and Molokai, the conversion of the profession there largely to the belief in its contagious character, and the fatally tardy efforts of the Government to control it by isolation.

In Norway and Sweden, that nursery of the modern doctrine of non-contagion, where the disease had increased in consequence to an alarming extent, a change of policy has taken place. In 1885 the Government passed laws authorizing the transfer and confinement within lazarettos of all lepers who are unwilling or unable to be isolated elsewhere in such manner as to prevent contagion in the family. It permits also the compulsory separation of married people. Since then the disease has been constantly diminishing. In 1870 the number of cases in Norway was 2,607; in 1893 it had been reduced to 800.

In the Russian Eastern Maritime Provinces the disease has become so prevalent that lazarettos have been established in several places. In New South Wales it has increased so much of late among European residents that a law for compulsory isolation was adopted in 1890. In Trinidad there were three cases in 1805, 860 in 1878. In British Guiana there were 105 cases in 1860, last year there were 1,000 cases.

Thus the disease shows itself increasing rapidly wherever it is granted free license, and diminishing where properly controlled. I believe, a direct consequence of the license which has been granted it by our profession and the nations under the mistaken faith in its non-contagious character.

But how is such unbelief explicable, how is any diversity of opinion as to the communicability of the affection possible in the face of the facts I have thus briefly laid before you? Why should leper commissions be still seeking some other explanation, and one of the most distinguished surgeons of the day still maintains that it is caused by one article of diet, and others cling to the doctrine of heredity as the all-sufficient cause of its continued existance? Partly in my opinion, because of the prolonged incubative stage of the disease, and the wholly unwarranted reliance upon data of negative character. Just as strong evidence of the kind can be adduced against the contagious nature of tuberculosis and syphilis. X, a leper, lies in a hospital bed next to Y, with syphilis. Their skins are abundantly occupied by the lesions of their respective affections in all stages of development. Ward-tenders, nurses, and physicians care for them with like indifference for months, and ordinarily with no ill results to themselves. The same patients have also lived for months, it may be, in the same condition with their families, and yet the latter have not contracted the disease. Do you not all know this to be true of syphilis in thousands of instances, and yet do you use them as evidence of its non-contagiousness? Why then apply such data to leprosy? On such negative evidence both affections should be equally pronounced non-infectious.

And what sounder evidence have we that leprosy is hereditary? No case of congenital leprosy has been observed, and the disease rarely affects children before the age of five. Leprous parents transmit no cachexia or constitutional degeneration to their offspring. We have no proof that a child born of leprous parents has become leprous, if removed immediately after birth to surroundings free from infection. Not one of the descendants of the one hundred and sixty leprous immigrants to the Northwestern States had become a leper at the time of Hansen's visit in 1887, and in but two of the children born at Molokai has the disease appeared. Without denying the possibility of the transmission of leprosy by descent, its apparent occurrence in any instance should not be accepted without the absolute demonstration of the impossibility of inoculation during or after birth. I believe the theory of heredity to be a very dangerous one, and that the sterner judgment of the Middle Ages, which made the leper individually the responsible agent rather than the progenitor, must again be adopted before the affection can be exterminated. We are dealing every day with infectious diseases, of in the infecting properties of which we have no definite knowledge, and yet we should consider ourselves guilty of criminal conduct if we should on this account refuse to acknowledge their contagious character. But in the case of leprosy we do know why it should be contagious, and the conditions which should be favorable to its inoculation. The burden of proof that it can be communicated in any other way is wholly with those of a contrary opinion.

THE PREVENTION AND CONTROL OF LEPROSY IN THE UNITED STATES.

If, then, we admit the contagious character of the disease, what measures should be taken for its exclusion from, and repression within our country? Is isolation effective, or necessary, or justifiable? Should immigration from infected nations be prohibited? I have already shown the favorable operation of such stringent measures in past times, the fatal error of their negligence, and the recognition of the necessity of their revival by other nations of the present day. What is our own duty in the matter? We have a considerable and ever-increasing number of lepers amongst us, distributed in numerous foci, which are known. We have individual cases also scattered over the whole country, a small proportion only of which, I believe, are known to physicians, and this is by far the most dangerous class, because they cannot be shunned. We have all met a few of them. They are free to come and go, and dwell where they like. We shall never control or eradicate the disease without resorting to strong measures, and the sooner they are enforced the better. If we wait until their necessity is more apparent, these results will be of far more difficult accomplishment.

I recommend for the serious consideration the following propositions:

(1) Every physician should be compelled by State law to report to the nearest board of health the existence of a case of the disease, and the neglect to do so on the part of a medical attendant, or a member of the leper's family, should be a penal offence.

(2) Immigrants affected by the disease should be arrested at ports of entry and along our borders, and turned back to their previous homes by the authority of the national board of health.

(3) Graded hospitals should be established by the National Government, in suitable insular localities where possible, within which both suspected and confirmed cases should be confined, and to which all access should be prevented excepting under proper restrictions.

Such compulsory isolation may be considered cruel to the few, but its longer neglect on our part is certainly a greater cruelty to the many, for in no other way shall we exterminate this most miserable disease. There can be no doubt that the advice of this body would have great influence in determining the action of State and National boards of health in the establishment of such measures for the public safety.—Boston Medical and Surgical Journal.

DIETETICS.

FOOD AND DRINK FOR THE SICK.

By J. HOBART EGBERT, M.D., Ph D.

Although universally admitted that the provision of proper nourishment for the sick and enfeebled is a most important factor in the management of diseases and bodily infirmities, still it is patent to careful observers that a sufficient knowledge of clinical dietetics is frequently wanting on the part of nurses and attendants, while physicians themselves are seldom well acquainted with the best methods of preparing food for the sick—even when they appreciate the kind or variety of aliment indicated or allowable in a given case. In view of these facts we have been led to present this brief, practical discussion upon the dietetics of the sick-room, believing that it may prove of especial benefit in suggesting to physicians various available means for relieving the monotony of a limited diet and also assist nurses and attendants in the preparation of the desired nutriments. The recipes herein presented have been gathered from various sources—some, we believe, are now published for the first time—but all have been found worthy of favor after due trial in both hospital and private practice.

Mankind being omnivorous, variety in diet is frequently required in sickness as well as demanded in health; still, as is well known, the character and amount of food necessary for the best interests of the sick varies widely according to the nature of the disorder and the stage reached in the progress of the malady. Thus, in fevers and during the earlier periods of acute diseases—most of which involve derangement of the digestive apparatus—a diet of the blandest and most digestible sort is all-important.

Light, nutritious food, in a liquid form, may be administered to such patients quite frequently, but in small amounts. In such cases, solid food is ordinarily irritating to the stomach and loathsome to the patient, while small quantities of fluid food taken at short intervals will afford a sufficient amount of nutriment, which the irritable stomach, when thus approached, will accept and quietly appropriate to the nourishment of the body. In acute inflammatory rheumatism, meat in any form is to be avoided, while fruit, green vegetables, gruels, and vegetable soups are likely to prove beneficial. Hysterical subjects need a generous meat diet and should avoid spirituous and fermented liquors. Consumptives require a liberal diet and should partake freely of substances rich in fat, as meats and preparations of cream or milk. In diabetes the diet should be highly nourishing and varied, and should include all meats—excepting liver—and vegetables not rich in starch or sugar; while all starchy and saccharine foods, malt liquors and wines are to be avoided. In diseases of the heart a dry nourishing diet is most conducive to the comfort of the invalid, as liquids are absorbed slowly; the table should be generous, but stimulants and strong coffee should be excluded, as they readily excite the heart's action.

Before presenting the various receipts and formulas available for preparing special varieties of food and drink for the sick and infirm, we would call attention to the fact that so-called "dieting" can easily be carried to extremes, and that due nourishment may thus be withheld from bodies and organs in which vitality is running low. Referring to this subject, the late Prof. Gross, of Philadelphia—to whose utterances the weight of authority has always been accorded—once said: "The diet of the sick-room has slain its thousands and tens of thousands. Broths and slops and jellies and custards and ptisans are usually as disgusting as they are pernicious. Men worn out by disease and injury must have nutritious and concentrated food. The ordinary preparations for the sick are, in general, not only not nutritious, but insipid and flatulent. Animal soups are among the most efficient supporters of the exhausted system, and every medical man should know how to give directions for their preparation. The life of a man is his food. Solid articles are, of course, withheld in acute diseases in their earlier stages; but when the patient begins to convalesce, they are frequently borne with impunity and greatly promote recovery. All animal soups should be made of lean meat, and their nutritious properties, as well as their flavor, may be much increased by the addition of some vegetable substances, as rice or barley."

The following rules, suggested by Dr. Napheys, should always be observed in preparing, cooking and serving food for the sick: All the utensils employed should be scrupulously clean. Never make a large quantity of one thing at a time. Serve everything in as tempting and elegant a form as possible. Put only a small quantity of an article on a dish at a time. Keep milk and other delicacies on ice in warm weather. Never leave food about a sick-room. Prevent, as far as possible, the odor of food in process of preparation from reaching the sick-room. Never offer beef-tea or broth with the smallest particle of fat or grease on it, nor milk that is sour, nor meat or soup that is turned, nor an egg that is bad, nor vegetables that are underdone.

Milk is justly held in high esteem as an article of diet for the sick. As a rule, it is agreeable to the palate and easy of digestion; still, in order to insure its highest usefulness due management is necessary. A simple fresh milk diet is not only monotonous but frequently occasions trouble. Biliousness may ensue and gastric and intestinal irritation supervene; while the purity and innocuousness of fresh cow's milk may many times be justly questioned. Only milk recently drawn from the udder should be used in the sick-room and, on the score of safety, this should be boiled as soon as received and set in a cool place. As a nourishing beverage this boiled milk may be served either cold or lukewarm and, for weak stomachs, may be greatly improved by the addition—when administered—of an equal quantity of carbonated water.

Milk Gruel.—Scald one-half pint of milk; add six raisins, and allow to stand five minutes. Take a tablespoonful of corn-starch and thoroughly mix with two tablespoonfuls of cold milk. Having placed the scalded milk in a farina boiler over the fire, add the cold milk and corn-starch, stirring the whole backward and forward until it begins to thicken; then add one ounce of sugar and let it cook one minute. Strain, and place in moulds in a cool place.

Milk Gruel with Oatmeal.—Fine oatmeal, two tablespoonfuls; milk, one pint. Stir the oatmeal smoothly into the milk. Then stir it quickly into a pint of boiling water and boil a few minutes until thickened. Add a pinch of salt and sweeten with sugar.

Milk Jelly.—As a variation in milk diet the following is recommended: Heat one quart of milk with one pound of sugar and when the sugar is dissolved, continue the heat at a boiling temperature, for about ten minutes. Then cool well and add, slowly stirring, a solution of one ounce of gelatine in a cupful of water. Next add the juice of three or four lemons. Pour into glasses and set in a cool place. It is necessary to have the milk quite cold before adding the other ingredients, else it will curdle.

Milk Punch.—Good brandy, one or two tablespoonfuls; cold milk, one tumblerful. Mix, with sugar and nutmeg to taste. This is a useful medicinal drink when a stimulant is required in conjunction with a nutrient.

Meat and Meat Preparations are usually conspicuous in the dietetics of the sick-room. A large proportion of the animal-food consumed by mankind is taken in the form of animal flesh, or meat, preparations of which are most valuable for the nourishment of the sick.

Beef Tea.—This is best made by dissolving a proper amount of a reliable brand of "beef extract" in a cupful of boiling water, seasoning with salt, celery salt and a little pepper, and serving hot.

Beef Juice.—Broil quickly a thick piece of fresh beef devoid of fat and bone; put in a meat press and squeeze out the juice. Season and serve full strength or diluted with hot water.

Chicken Broth.—Skin and chop up a small chicken, or half a large fowl, and boil it, bones and all, with a blade of mace or sprig of parsley and a crust of bread, in a quart of water, for an hour—skimming it from time to time. Strain through a coarse colander.

Mutton Broth.—Lean loin of mutton, exclusive of bone, one pound; water, three pints. Boil gently till very tender, adding a little salt and onion according to taste. Pour off the broth in a basin, and when it is cool skim off all the fat. It can be warmed up as wanted. If barley or rice is added, as is desirable during recovery from sickness, it should be boiled separately until quite soft, and put in when the broth is heated for use.

Cutlet for Invalids.—One nice cutlet from the loin or neck of mutton; water, two teacupfuls; celery salt a sufficient quantity, or one very small stick of green celery. Remove all fat from the cutlet and put in a stewpan with the other ingredients. When fresh celery is used it should be cut in thin slices before being added to the meat, and care must be taken not to add too much. Stew very gently for nearly two hours, adding salt and pepper to taste, and from time to time skim off every particle of fat that may rise to the surface. If the water is allowed to boil fast the cutlet will be hard.

Eggs as articles of diet are cheap and nutritious; moreover, they are quite easily digested, if not damaged in cooking. An egg is a rather complete food in itself—containing, as it does, everything required for the development of a perfect chick. An average egg weighs a thousand grains, and is more nourishing than an equal weight of beefsteak. For invalids, eggs should be soft-boiled, or dropped from the shell into boiling water and served with crackers or toast.

Cup Custard.—One egg; one cup of milk; sugar, nutmeg and salt to taste. Beat egg thoroughly in a teacup, add the milk and flavoring, mix and bake about twenty minutes in an oven moderately heated. May be served cold or warm, with or without jelly.

Egg and Brandy.—Brandy and cinnamon-water, each four ounces; the yolks of two eggs, and half an ounce of loaf sugar. Rub the yolks of the eggs and sugar together, and add the cinnamon-water and brandy. This is given in two to four teaspoonful doses as a stimulant and restorative.

Drinks, properly prepared, are quite as important to the sick-room as food. Especially during the summer season and when suffering from febrile conditions, will the value and advantage of cooling and refrigerant drinks be appreciated; while mucilaginous demulcent fluids will be found soothing to irritable states of the alimentary canal and pulmonary and urinary systems.

Imperial Drink.—Dissolve from two to three drachms of cream of tartar in a quart of boiling water, add the juice of one lemon and a little lemon peel, and sweeten with sugar. When cold it may be taken freely as a cooling drink and diuretic. A valuable drink in threatened sunstroke and passive congestion of the brain.

Lemonade.—Pare thinly the rind of a lemon and cut the lemon into slices. Put the peel and sliced lemon into a jug with an ounce of white sugar and pour over them one pint of boiling water. Cover the jug closely and digest until cold. Strain or pour off the liquid. Citron may be used instead of lemon, and likewise furnishes a grateful and refreshing refrigerant beverage.

Milk Lemonade.—Sugar, one and a half pounds, dissolved in a quart of boiling water together with half a pint of lemon juice and one and a half pints of milk. This makes a cooling, agreeable, nourishing beverage.

White Wine Whey or Posset. To half a pint of milk, whilst boiling in a saucepan, add one wineglassful of sherry and afterwards strain. Sweeten with pulverized sugar according to taste. "A useful drink in colds and mild febrile disorders."—(Pavy.)

Linseed Tea.—Place in a jug one ounce of bruised linseed, two drachms bruised licorice-root, half-ounce white sugar and two tablespoonfuls of lemon juice, and pour over them one pint of boiling water. Cover lightly, and digest for three or four hours near a fire. Strain through linen before using. This makes a mucilaginous liquid possessing demulcent properties and of special value in bronchial and urinary affections.

Barley Water with White of Egg.—Take a tablespoonful of coarse barley and wash well with cold water, rejecting the washings. Then boil for an hour or more with a pint and a half of clean water, in a covered vessel or saucepan. Add a pinch of salt, enough sugar to render palatable, and strain. To four or six ounces of barley-water thus prepared add the white of one egg. The value of this preparation in gastro-intestinal inflammation and irritation is not easily overestimated. In the entero-colitis of very young infants its exclusive administration for thirty-six and forty-eight hours will often relieve when all other measures have failed.

When a patient cannot be raised from the bed without risk of exhaustion, a medicine tube or crockery feeder should be used, but the same appliance, or even one of the same appearance should not be used for administering both food and medicine. The patient's mouth should be kept clean and fresh, as should also all external surroundings.—Dietetic and Hygienic Gazette.

DIET FOR THE SICK.

By MISS HELEN LOUISE JOHNSON.

Without proper cooking no food is palatable, and unless the palate is satisfied, food is practically useless. Hunger compels a person to eat, and in his choice of food the palate is his guide.

In general, the needs of no two individuals can be satisfied by exactly the same diet. In sickness it is the province of the physician to adjust the food to the condition of the patient. In convalescence the taste of the individual or the judgment of the nurse, or both combined, will usually not fail of good results. Bear in mind that a sick person is not in the same condition as ourselves and, no matter how absurd his cravings may seem, they may be but natural longings for that which his system needs.

In the first place, I want to tell you how to prepare beef juice. Take a pound of beef from the round and cut it very fine. Put it in glass jar and place the jar in cold water on the back of the stove, where it will slowly heat for an hour; then bring it to the front of the stove, where the water will simmer, not boil, for an hour.

Beef tea is made much the same as beef juice, with the addition of a cup of cold water to every pound of meat before the meat is put into the jar. The beef is also taken from the round and chopped very fine.

Beef extract and beef tea are entirely different things, but the distinction is very rarely known. If the patient is taking a tablespoonful of beef juice, he is taking as much nourishment as there is in a cup of beef tea.

Beef juice or beef extract is prepared in many different ways. In giving a lecture on soups, I explain why we put cold water on meats. The principle applies to beef tea as well as to making soups. If you add hot water, it coagulates the juice, while the cold water draws out all the juice. Hard water prevents the juice coming out also. The moment that salt is added to water, it makes it hard and it does not let the juice out. If the water be very hard, soda must be added, which will make it soft.

Now, what I want to do in a "sick diet lecture" is rather to suggest what to do. Have a physician upon whom you can depend, and I can tell you nothing better for your guidance than never to have a physician unless you can place reliance on him. When beef tea might be given a patient, you must consult the physician. If the physician does not know how to prepare it, he will, at least, tell you what to prepare.

Beef juice is an important part of the sick diet. When your patient is in a very reduced state, nourishment by the spoonful might be given him. If the patient is sick a long time he often becomes very tired of it before many weeks are over, and the greatest care must be taken in the preparation of his food. Pepper must never be added to beef tea, which is an important point in serving it. Pepper and vanilla must be done entirely away with; they have no place in the diet of the sick unless prescribed by the physician.

In preparing beef juice you can broil the beef. I am going to take a pound of beef and show you how much juice comes from it when it is broiled. Beef tea or beef extract rarely look well unless they are colored, and consideration in this matter should be had, particularly for a patient in a reduced state.

In making beef essence or beef tea, buy the best meat, as good beef tea cannot be made from gristly meat. Take the beef from the round and put it on the broiler, and broil it only enough to start the juice; chop it fine; slowly heat it, never passing the simmering point. Beef tea and beef extract must never boil so the juices are coagulated. Season with salt, but never put in a slice of onion. Beef essence may also be made by chopping the meat from the round very fine and putting it in a braising-pan, with a bay leaf and a piece of celery. The pan may then be placed in a moderate oven, and the meat be left to stand there until the juice is well started. The juice is then squeezed from the meat and served as in the foregoing instance. The braised beef extract tastes entirely different from any of the other juices, and it is a pleasant change when a person has to take it from day to day.

I now want to speak on the subject of gruels. The gruel is usually served as a porridge, and I first want simply to show you the consistency in which gruels should be served.

The farina gruel, which is a form of gruel that is the easiest to give because the most palatable, is prepared in this way: To a cup of boiling water add a salt spoonful of salt; when boiling, sprinkle in one tablespoonful of farina. When it has cooked about ten minutes turn it into a farina boiler and add a cup of milk and cook again for about five minutes. Milk should never be boiled to give to a patient unless in severe cases of dysentery or other similar serious diseases, when it must be boiled. Milk should always be scalded. Scalded milk can be taken day in and day out. I think boiled milk is thoroughly indigestible. The moment it is cooked, after taking it a few times, even three or four times, the stomach rejects it. In cooking the farina gruel in which milk is cooked, never do anything more than scald the milk. The farina boiler should be used. The farina boiler is a peninsula—a sauce-pan surrounded on three sides by water.

Whether a thing is palatable or not to a patient depends much upon how it is served, and these things are rarely served in the proper way. As much depends upon how it is served, the proper serving of it will help much toward curing the invalid. If you want to sweeten the gruel, a little granulated sugar or loaf sugar may be used; pulverized sugar and other sugars may be the most expensive, but they are not the most wholesome. Pulverized sugar should never be used for the sick, and, ordinarily, people do not like it. It should be remembered that gruel is a gruel and not a porridge. It should be served so that it can be poured into the patient's mouth if necessary—so that it can be poured down his throat instead of having him sit up and be fed with a spoon.

We now come to milk punch and egg-nog. The best milk should be used. Skim milk is not food. Milk punch and egg-nog want cream or very good milk. They want that which gives energy, and skim milk does not give energy. In making milk punch scald a cupful of milk and add two teaspoonfuls of sugar to the milk and stir until dissolved, then add a tablespoonful of brandy. Never use wine unless a physician tells you to. Invalids must take stimulants entirely under the advice of a physician; never according to their own ideas. Always use brandy unless otherwise advised by a physician. After you have beaten it until it is foamy, do not fill the glass so it runs over, but fill it almost to the top. Have a small glass and fill it about full instead of filling a large glass half full. Milk punch and egg-nog are served where a person needs considerable nourishment; also where a patient needs a stimulant. Sometimes he needs more than the simple nourishment, and the egg and milk together make a very concentrated form of food. It can be made with the whole egg, or the yolk alone can be used. Mix the yolk with two teaspoonfuls of sugar; add one cupful of good milk, either warm or cold, and at once add one teaspoonful of brandy. Then beat this up lightly and quickly and turn into a glass.

In case of fever, anything cool assists the patient very much more than anything warm, and in such a case the cold egg-nog is very desirable. There are really very few forms of food to give a patient in case of fever. I can this evening only give you suggestions, and I am here going to suggest a few things to give under those circumstances.

The first form of egg-nog that I gave you was made with the yolk of an egg and a cup of milk and a teaspoonful of brandy. When the patient must have more albuminous food, the white and yolk must be given. The brandy will at once cook the egg—as soon as it reaches it. Eggs should be beaten stiff and dry. Egg-nog should be given slowly. If a patient drinks milk rapidly, it will not be digested. When milk is given to a child or to a patient it should be taken slowly, not rapidly, in order to nourish the patient who takes it, and egg-nog should be taken in the same manner. The third form of fluid food is wine whey. It is often prescribed by physicians, but many people have not the faintest idea what the physician is talking about. Wine whey is very simple to make. If you are in a hurry put a cupful of milk in a farina boiler and let it scald; add a quarter of a cup of wine, and let it stand until the albumen of the milk is curdled. When you strain it you have the whey without the curd. Very often physicians give the curd with the whey. The curd must then be chopped very fine or pressed through a sieve. Only a small portion should be given.

I shall now talk of convalescent food. The first is the ever-present beef tea, which can be changed from day to day. It can be flavored with a bay leaf, or a little celery, or when the physician will allow it, with a little tomato.

In preparing an egg for a patient it is best to use an egg cup, which obviates the necessity of experimenting with many eggs to obtain the proper consistency. Break the egg and put it into the cup until it is boiled to the proper consistency. Boiled eggs for a patient should always be boiled soft; never hard. When you boil an egg hard the white, the albuminous portion of the egg, is coagulated, and the yolk often remains soft. That is not the proper way of preparing it. The yolk of the egg when soft is perhaps not very unpleasant to the taste, but the white of the egg improperly boiled is exceedingly unpalatable. The white and the yolk must be boiled alike. In boiling an egg for an invalid, it should be put into an egg-cup, so as to see the consistency.

Poached eggs may be given convalescents. In poaching an egg separate the yolk from the white. Boil the white first by slipping it on to the water, and as soon as it begins to coagulate, drop the yolk on to the white. Poached eggs are very pretty and digestible, and when perfectly prepared are very palatable. The white is not palatable when almost raw, and, as said before, though the yolk is not so bad when but partially cooked, it should have the proper consistency and be rightly prepared for the sick. Eggs should be served poached or boiled: in no other form.

Broiled beef pulp might be mentioned next. I do not mean Hamburg steak, but simply the pulp of beef broiled. It is very pleasant to the taste, and is prepared in this way: Take a pound of raw beef from the round, and with a sharp knife scrape across the grain until the pulp is scraped from the fibres; make it into small cakes, and broil it over a hot fire. When thinly spread on delicate slices of bread, it is very palatable.

Chicken, game, steaks and chops may be given convalescents. There is but one way of broiling steak for the sick, and that is the English way. Three chops are broiled, placed as an under, upper and middle slice, and the middle one only is given to the patient.

There are very few patients who cannot be given ice cream. People who are ill crave such things, and very often their cravings are a proper guide. I know a case in which ice cream saved a patient's life. Ice cream can be taken before anything else to a patient in a hospital. Rice may be given, but never unless it is cooked properly. Never give any one who is sick anything fried. Never fry a beef steak. Fried potatoes, it is perhaps needless to say, should never be given a sick person. Very often an invalid desires things that seem absurd, but they only seem absurd because we cannot put ourselves in the place of the patient. We have our ideas of how they should feel, and not their ideas of how they do feel. Sometimes their desires may be just what the system needs.

Above all things serve the food daintily and prettily to a patient. His appetite is greatly influenced by the appearance and the manner in which the food is served, and nothing can be too good for our sick.—Practical Medicine.

* * *

THERAPEUTICS.

Home and Foreign Drugs.

American medical, pharmaceutical and trade journals, says the National Druggist, usually keen to detect a hidden advertisement in communications recommending new drugs and preparations when the same emanate from home sources, throw caution and ordinary business sense to the winds when it comes to recommending and puffing the very same class of merchandise, bearing a foreign name and recommended by foreign authority. The success of one or two German chemicals, the products of synthesis, opened the doors for a flood of antiseptins, antifebrins, antipyrines, and other "antis" ending in "ol" or "in." They come to us covered all over with patents—patents covering the names, the process of manufacture, the ingredients (save those which are kept absolutely secret), the modes of dispensing, the package, the label—in short everything that a patent can be made to cover. In a word they are patent medicines in the very widest and strictest sense of the word; and yet they are received with enthusiastic welcome by press and practitioner, and are given, gratis and gladly, advertisements that money could not purchase for a home product, even though ten times more valuable, and not one-tenth so much patented.

One of the proprietors of a drug of this sort, recently established in America, on being approached by the solicitor of advertising for an American medical journal, answered very curtly that "they didn't have to advertise their articles. They got all the advertising they wanted for nothing, in the shape of laudatory communications in the reading matter of the medical journals." Which was true, every word of it, and that in spite of the fact that it was a patent medicine. The very journal for which the agent was soliciting, and in the very copy which he carried as a specimen, contained no less than six laudatory notices of the drug in question—one of them a communication covering several pages and heralding its virtues in almost every known form of disease. Per contra, the same journal had enjoyed for years a handsome revenue from the advertisement of a reputable proprietary medicine house of this city, but had persistently refused to admit within its reading matter, a little notice commendatory of one of its specialties, the formula for which was printed on every bottle.

It is useless to plead that these imported patents are so valuable that the profession must have them and must use them, secret nostrums though they be. This is not true nor is it true that the manufacturers over there are any more honest and frank as to the nature or origin of their wares than are American manufacturers of similar drugs. In proof of this assertion we call the attention of our readers to Gawalowski's merciless exposure of a new compound which is getting ready in Germany to make a descent on Europe and America in the style of its predecessors—the antiseptic kreolin, of the wondrous value of which the advance guard of certificates have already commenced to appear in our journals. Will the latter be warned in time, or will they swindle themselves out of thousands of dollars by giving it the usual American welcome and gratis advertising?

Antiseptic Treatment of Eczema Impetiginosum.

An American physician, Dr. H. Klotz (New York), is successfully treating eczema impetiginosum by antiseptic methods. Twice daily, morning and evening, he disinfects the affected parts by washing them carefully first with soap and water and then with a solution of perchloride of mercury in the proportion of 1: 3,000 or 1: 5,000, after which compresses steeped in the same solution are applied to the eczematous region and allowed to remain for thirty minutes or an hour. Lastly, the skin is dried and coated with a 10 per cent. boracic acid ointment, covered with a thin compress or a layer of cotton-wool. This treatment is continued until the suppuration ceases completely.

In the case of children, the corrosive sublimate is replaced by a 2 or 3 per cent. boracic acid aqueous solution. If the eczema is very much inflamed, the compresses are steeped in boracic acid solution, to which a little subacetate of lead has been added.—Medical Week.

Responsibility for Untoward Action.

With the characteristic pithy and trenchant utterance which "hews to the line letting the chips fall where they may" and which marks all of his sayings, Dr. Frank Kraft, Ohio, Professor of Materia Medica, Cleveland Medical College, writes: "The professional market seems to be filled with substitutes for the original and ever favorite antikamnia; all warranted to do what the antikamnia has succeeded, by hard work and expenditure of much money, in establishing; all of these nefarious products masking under some name, beginning with an A, and warranted to still pain, etc., are base imitations. They may be, and perhaps are, coal tar products, but they cannot take the place of antikamnia. Insist upon getting the original, and caution your druggist that if he practices any substitution you will not only decline further to deal with him, but hold him personally responsible for any untoward action of his substituted remedy."

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The Physician as A Business Man.

A prominent practitioner of medicine has said that the physician's fisrt duty to society is to make a living and keep out of the poor house.

Although the truth of this expression is self-evident it seems to be forgotten and is certainly ignored by a large number of medical men. Doctors are proverbially bad business men. The very nature of their calling throws its business aspects into the backgound. The doctor's business must be conducted largely on a credit basis and the collection of bills is necessarily difficult. Medicine is a vocation, a profession—not a trade. Nevertheless there is a business side which is frequently ignored. The physician must pay rent or taxes. He must eat, drink, and be clothed. He must support his family and educate his children. He must buy books and surgical appliances. He should make provision for the future both of himself and his family. One thing alone will do all this. That one thing is not the gratitude of patients nor their effusive thanks, neither is it promises to pay at some future time. These things are pleasant episodes in the doctor's life, but they are too intangible to live upon. The one thing necessary to meet these various outlays is money. Nothing but money or its equivalent, will do it.

The question of duty enters largely into the question of business methods. The doctor, like every other able-bodied adult male, is under obligation not to make himself a burden upon society. When he assumes the responsibility of a family, he assumes other duties which he has no right to shirk. These duties cannot be fulfilled by allowing patients to leave bills unpaid which they are able to pay. We should not for an instant sanction the idea that the medical man should do no practice except for money. The fact that he is engaged in a calling implies the duty of being charitable and working willingly and freely for the worthy poor. That question does not enter into our present discussion. We refer entirely to the non-payment of bills by those who are able to pay.

Lax Business Methods.

Lax business methods are due to various causes. The inclinations and mental tendency of most physicians run in the direction of strict professional work and not business. Business is more or less distasteful to them. The whole mind is occupied with the care of patients and the whole thought is given to that portion of the work. The busy doctor is so much driven and so harassed by practice that he neglects his collecting. Lack of business training is also a cause of improper business methods. The medical student receives no instruction and no intimation of the proper methods of conducting the business side of his work. He therefore lacks the training which is gained so early by the young man who engages in mercantile pursuits.

Lack of appreciation of the value of one's own work is another cause of small collections. The man who under-estimates his own services cannot expect others to place a high value upon them. If he is diffident in presenting his bills and in pressing for payment he engenders, perhaps unconsciously, the feeling that his services are not worthy of remuneration. This, we believe, is a prolific cause of "bad debts." If a man does not place a proper value upon his own services, if he is careless in keeping his books and in rendering bills, he must not be surprised if his patients are slow in making payment. If the payment of his bills does not seem to be a matter of importance to the doctor, if he allows his business to drift year after year without proper settlements, he must not be surprised if his patients drift into the idea that payment is not important. If people understand that the doctor lives upon his practice, that he regards payment of bills as important, and that he expects payment, they will pay much more willingly and promptly. They will respect the doctor more and place a higher value upon his services. It is a serious error for a man to render his bills or go about his collecting in an apologetic manner, or to carry in his manner the impression that he is asking a favor. He should of course avoid on the other hand the extreme of being harsh and unfeeling in his business methods and giving the impression that he practices medicine for revenue only. A strict attention to the business side of his profession does not, however, mean heartlessness or lack of charity, and the physician who neglects it, does a wrong to himself, to his family, and to his profession.

Business Methods in Medicine.

Having granted that there is a business side to the practice of medicine, is there any reason why the business element should not be conducted on business principles? We are able to see but one answer to this question, and that a positive negative. Business principles do not involve forcing of payments or at least full payments from the poor, the needy, and the unfortunate. We wish again to insist that the conscientious medical man will frequently find it his duty to do work that is unremunerative. The exact amount of such work will depend upon the individual and upon the locality. It is our belief that few physicians shirk this duty. We wish with equal positiveness to reassert that it is not his duty to work without remuneration for those who can afford to remunerate him.

One of the chief violations of sound business principles is laxness in keeping accounts and rendering bills. Short accounts make long friends. We are well aware that conditions differ vastly in different localities. In the cities the monthly or quarterly bill is expected and is paid with the household expenses. In other localities the rendering of a bill, particularly at such short intervals would be looked upon as an insult. Between these extremes there is every grade. Where sending a bill is not customary a settlement of accounts should be obtained at certain intervals. Where rendering an ordinary bill is not possible it can sometimes be sent as an "annual statement" or a "statement of account," with a brief printed note to the effect that a statement of all accounts will be sent at the end of each year. Even where this is not customary the people in many localities would soon become accustomed to it and take it for granted.

Such a statement as this has a very positive good effect. It renders a debt that is indefinite and intangible, definite and concrete. The knowledge that there is an unpaid account on the doctor's books is not a very active stimulus to payment. The fact brought directly to a patient's attention that he owes the doctor fifteen dollars and a half is a concrete and a very definite fact and is conducive to payment. Even if it is not reduced to writing, the habit of summing up bills and informing debtors of the exact amount of their indebtedness will stimulate payment. A statement of the amount due at certain regular intervals is honorable and business-like. There is no community where at least this cannot be done. It is far better to make the statement in writing. The beginning of the year is a very appropriate time for such a statement if shorter intervals cannot be adopted. The habit of rendering bills at regular intervals should be adopted wherever it is feasible. Allowing bills to run on without a settlement or a definite knowledge of how the account stands as is very frequently done by country practitioners, is one of the most fruitful sources of loss to the doctor. It is farthermore unjust to the patient to allow a bill to run up to such proportions that it can never be paid. This could often be avoided were statements occasionally made and partial payments urged.

It is a very proper and business-like measure to get accounts into the form of notes wherever it can be done. A man will pay a bill far more promptly than a running account and a note with far more readiness and certainty than a bill. We commend the careful reading of the article on the use of notes by physicians on another page of the present issue.

There is no department in practice which requires more tact and judgment than does the conduct of the business element, with the rendering of bills and the collection of debts. Over haste and over anxiety is sometimes as fatal as lack of energy. The doctor does not, however, usually err in this direction. Much may be done by the careful keeping of books and by the periodical rendering of bills or statements to render collections easy and prevent bad debts. In other words business methods judiciously applied in medicine will do much to insure just remuneration for valuable services.

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A German specialist says, "Nature has recently pleaded for giving children more sleep." A healthy infant sleeps most of the time during the first few weeks, and in the early years people are disposed to let children sleep as much as they will. But from 6 or 7 years old, when school begins, this sensible policy comes to an end and sleep is put off persistently through all the years up to manhood and womanhood. At the age of 10 or 11 the child is allowed to sleep only eight or nine hours, when its parents should insist on its having what it absolutely needs, which is ten or eleven at least. Up to 20 a youth needs nine hours sleep, and an adult should have eight. Insufficient sleep is one of the crying evils of the day. The want of proper rest and normal conditions of the nervous system and especially the brain produces a lamentable condition, deterioration in both body and mind, and exhaustion, excitability and intellectual disorders are gradually taking the place of the love of work, general well being and the spirit of the initiative.—N. Y. Med. Reporter.

BOOK REVIEWS.

The Pathology and Surgical Treatment of Tumors. By N. Senn, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College; Professor of Surgery, Chicago Polyclinic; Attending Surgeon to Presbyterian Hospital; Surgeon-in-Chief, St. Joseph's Hospital, Chicago. Octavo, pp. 709. Illustrated by 515 engravings, including full-page colored plates. Price, cloth, $6.00; half-morocco, $7.00. Philadelphia: W. B. Saunders, 925 Walnut street. 1895.

Books specially devoted to this subject are few. In most works on surgery the surgical pathology of tumors is condensed to a degree that is not compatible with its clinical importance. The energies of pathologists have ben largely directed during the last twenty years to the founding and developing of the new science of bacteriology. While surgeons have devoted much of their energy to the advancement and improvement of operative technique, investigations on the very important and practical subject of tumors have been neglected.

The present work is the result of many years of experience and is in every way worthy of the great reputation attained by the author as a surgeon and pathologist. He has produced not only a valuable work of reference for the busy practitioner, but also a reliable and safe guide for the surgeon. From a purely scientific standpoint the work is of very high order of merit. The scientist, however, has not forgotten the practitioner, so that the work is not only scientific but eminently practical.

The increase in volume caused by a tumor is due entirely to erratic cell-growth from a matrix of embryonal cells of congenital or post-natal origin; the enlargement of a part or an organ caused by chronic inflammation which so often constitutes a tumor is due to proliferation of pre-existing mature cells acted upon by pathogenic micro-organisms or their toxines, and to the vascular changes and cell-migrations characteristic of inflammation; while a retention-cyst essentially consists of a physiological secretion in a pre-formed glanular space, the result of a mechanical obstruction. The author's classification of tumors is, therefore, in accord with this theory of their origin. He divides them into three great classes—true tumors, inflammatory swellings, and retention-cysts. A tumor he defines, therefore, as follows: "A tumor is a localized increase of tissue-proliferation of embryonic cells of congenital or post-natal origin produced independently of microbic causes." A special effort has been made to trace every tumor to its anatomical starting point and histogenetic source. This is in fact one of the most characteristic features of the work. The microbic origin of tumors, the author believes, has not been established by any convincing experimental investigations or clinical observation.

The first portion of the work is devoted to a general consideration of tumors, their origin, nature, anatomy, pathology, and clinical aspects. Following the section on classification, each class is considered separately beginning with benign, epithelial tumors and terminating with sarcoma. Although this plan involves some repetition, the work is in no sense padded and nothing has been added for the sake of filling pages.

The illustrations are a very striking and important feature of the work, over one hundred of them being original. They are almost without exception admirably executed. The printing and typographical work is rarely equalled. The work is on the whole one of the most important contributions of recent years to American medical literature.

Practical Dietetics, With Special Reference to the Diet in Disease. By W. Gilman Thompson, M.D., Professor of Materia Medica and Therapeutics in the University of the City of New Fork, Visiting Physician to Bellevue and Presbyterian Hospitals, New York. New York: D. Appleton & Co., 1895. Pp. 22-781. Price $5.00.

The author in the introduction, states that the text-books and medical literature relating to food and dietetics and the application of diet to disease are incomplete. Realizing this fact, that here was an excellent field for such a work, it is hard to understand why more time and thought were not devoted to the preparation of this volume.

The reading medical public have a right to expect the evidences of original thought and observation in more than one portion of a text-book.

Forty-eight pages are devoted to the most important subject of milk and milk products. This is a very fair presentation of well-known facts. The author has wisely culled the valuable pertaining to the subject from medical literature.

The animal and vegetable foods, fats and oils are then taken up and are, on the whole, well handled. Cod-liver oil receives the mention it deserves.

Section II. is devoted to stimulants, beverages and condiments. A large portion of this section (twenty-seven pages) has been given to the consideration of alcohol. This drug evidently plays no small part in the author's therapeutics. Alcohol is referred to as a "definite food." This statement is found in all the older works on Materia Medica and Therapeutics, but it is not accepted at the present day. Its advocacy as a remedy in febrile conditions, independent of its use as a stimulant, is greatly to be regretted.

We are told that, in certain cases of diphtheria and capillary bronchitis, alcohol should be prescribed at once. This is decidedly at variance with the best pædiatric thought of to-day, and should not appear in a modern text-book. Many of the leading pædiatrists of the world never give alcohol to young children. Alcohol is further advised in atonic dyspepsia in children. There are but few other drugs that will derange a child's stomach so completely and in so short a time as alcohol. In section III. the chapters on "Cooking" are good, and may be read with interest by all, as may those that follow which refer to the concentration and condensation of food. The chapters devoted to diet in fever and diet in disease in general are the best in the book. The dietetic treatment of Anæmia in the young deserves to be mentioned particularly. The diarrhœal diseases of infants are fairly well treated, but there is nothing that may not be found in the later literature of diseases of children. The views expressed and the methods advised impress one as being the results of reading, rather than of actual observation. The section on Infant Dietary,—the valuable portion of it, is compiled largely from the works of well-known authors. One table, however, is quoted as demonstrating "how and when to feed or nurse the average infant" that does not, by any means, so demonstrate. This table is not only unscientific, but absolutely irrational, and why it should be quoted is beyond the conception of the reviewer. Had the author confined himself to the preparation and to the application of foods in disease, he would have contributed a valuable monograph to medical literature.

An American Text-Book of Obstetrics, By American Teachers. Contributors: James C. Cameron, M.D., Edward P. Davis, M.D., Robert L. Dickinson, M.D., Charles Warrington Earle, M.D., James H. Etheridge, M.D., Henry J. Carrigues, M.D., Barton Cooke Hirst, M.D., Charles Jewett, M.D., Howard A. Kelly, M.D., Richard C. Norris, A.M., M.D., Chauncey D. Palmer, M.D., Theophilus Parvin, M.D., George A. Piersol, M.D., Edward Reynolds, M.D., Henry Schwarz, M.D. Editor Richard C. Norris, M.D., Art Editor, Robert L. Dickenson, M.D. With nearly 900 colored and half-tone illustrations. Imperial octavo. Philadelphia: W. B. Saunders, 1895. Pp. 1,009. Cloth $7.00.

This is the last addition to the admirable series of American text-books which have appeared from time to time during the last two years. It is in some regards the most remarkable of that remarkable series. In typographical appearance and richness of illustration, few works have been published which can compare with it. The illustrations are many of them of remarkable excellence and very few of the nine hundred can be called poor. The work is also admirable owing to the high literary and scientific character of its contents. Taking all things into consideration it is in our opinion the best work on obstetrics for the American physician of 1895. The high standing of the gentlemen whose names appear upon the title page is a guarantee that it will present the various aspects of this important department of medicine as it is taught and practiced by modern masters of the art.

Advances in the science and art of obstetrics have kept pace with the advances which have characterized all branches of medicine and surgery. The authors selected were therefore teachers of obstetrics from the leading medical schools and hospitals, with the special object of presenting the most modern ideas.

In general arrangement, the book follows that of most recent text-books. Obstetric emergencies receive particular attention as well as the mechanics of normal and abnormal labor. The various operations in obstetric surgery are described in great detail. It is here that the illustrations prove of very great value. The subjects of anatomy and embryology are very complete and of unusual interest. A new feature is the fact that all the figures are drawn to a uniform scale while the saggital sections all show the left side of the body.

More than usual attention is devoted to the puerperal period, the subject matter being of especial merit. The new-born infant also receives more attention than is usually accorded to him in works on obstetrics. The editorial work has been, on the whole, well done, and the subject matter has been very judiciously apportioned and arranged.

Pathology and Morbid Anatomy. By T. Henry Green, M.D., Lecturer on Pathology and Morbid Anatomy at Charing-Cross Hospital Medical School, London. Seventh American from the eighth and revised English edition. Octavo volume of 595 pp., with 224 engravings, and a colored plate. Philadelphia: Lea Brothers & Co., 1895. Cloth, $2.75.

This excellent work is too well known to require extended notice. It has long been a leading text and reference book in all English-speaking countries, a fact indicated by the number of editions demanded. A knowledge of the subjects covered by its title is essential to graduation and not less so to the practitioner, who must understand the nature of a disease as a prerequisite to rational curative measures. Thanks to the tireless industry of laboratory workers and clinicians these sciences are in a state of constant development, and in order to represent their existing position, this volume has been thoroughly revised and new chapters have been added.

So rapid has the increase of our knowledge been that frequent revision is absolutely necessary to render a book of this character worthy of continued study. The present revision now renders the volume the last and most closely up-to-date of any work upon pathology. It covers practically the same ground as did previous editions. The rapid accumulation of facts and the constant changes of opinion which have characterized many departments of pathology, have, however, rendered several new sections necessary. The book has been popular because of its concise yet complete character. The pages are not burdened with references and discussions upon disputed points. The present volume presents in compact form practically all of pathology that the practicing physician requires to know.

Disorders of the Sexual Organs in the Male. By Eugene Fuller, M.D., Instructor in Venereal and Genito-Urinary Diseases, New York Post-Graduate Medical School. Philadelphia: Lea Brothers & Co., 1895. Pp. 238—(with 25 engravings and 8 full page plates.) Cloth $2.00.

It seems at first thought strange that for so long a time so little thought and scientific study were devoted to diseases of this class. From time immemorial this department of human maladies has afforded charlatans their most lucrative business, a fact which it may be wholesome to consider as reflecting upon the comparative success of the regular practitioner. It is probably one of the causes why reputable physicians were unwilling to engage in the practice of the specialty. Against rational methods empiricism should have no chance, and a work based on sound knowledge performs a service of moral and physical value. The author's wide experience in this special line has convinced him that male sexual disorders arise more frequently from pathological states of the organs concerned than from neurological or mental causes. He has endeavored to place the literature of sexual pathology on a par with that of sexual neurology, and to deal with the etiological factors in the order of their real importance.

The first chapter is devoted to anatomy and is admirably illustrated. In the second chapter physiology is considered in detail, and this is followed by a most excellent chapter on pathology. Sixty pages are devoted to clinical features and differential diagnosis and clearly evinces great practical experience and intimate acquaintance with the subject. The author's treatment, founded upon a grasp of the whole subject, can be followed with confidence by those to whom this large class of cases apply for relief. The book closes with a detailed account of about forty illustrative cases.

The Medical News Visiting List for 1896. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60 patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, $1.25. Philadelphia: Lea Brothers & Co., 1895.

This is the most compact and practical visiting list with which we are acquainted. In its several styles it is adapted to almost any system of bookkeeping. The text portion (32 pages) contains most useful data for the physician and surgeon, including an alphabetical table of diseases, with the most approved remedies, and a table of doses. It also contains sections on examination of urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers, and the ligation of arteries. The classified blanks (160 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts. The selection of material in the text portion and the arrangement of the record blanks could scarcely be improved. In the mechanical execution of the book, and in quality of paper and in strength and beauty of binding nothing seems to be left wanting. When desired, a ready reference thumb-letter index is furnished, and will save many-fold its small cost.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and subjects. Vol. XVI. W-Zythus. Washington: Government Printing Office. 1895.

This volume completes the first series of this great work. It includes over twelve thousand author titles representing about sixteen thousand volumes and pamphlets. The extent of the work is shown by the enormous number of titles which it includes. There are 176,364 author titles representing 85,663 volumes and 151,504 pamphlets. Of separate titles there are 168,557 representing books and 511,112 referring to journal articles. The library of the surgeon general now contains 116,847 books and 191,598 pamphlets. This great mass of literature has been almost wholly collected during the past thirty-five years.

The manuscript of a second series including all the titles of books and articles received too late for insertion in the first series is now nearly prepared and will make at least five printed volumes of the size and style of the first series. Dr. John S. Billings, under whose supervision this great work has been done, retires with the completion of the present volume. Too much credit cannot be awarded to him by the medical profession for the excellence of his work. It is a work of which American medical men may well be proud and is one of almost untold value.

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Dr. Carstens, of Detroit, gives the following summary as the result of his observation

1 With a small, narrow-bladed, sharp knife, make a clean incision through the skin of the necessary length, and with another sweep or two cut through the linea alba, muscle, etc. Lift the peritoneum with your fingers, open it and enlarge the incision.

2. In closing the abdominal incision use animal ligature, kangaroo tendon and catgut. First carefully bring together the peritoneum in a running stitch, then the transversalis fascia, and the rectus if the incision is through the muscle. Then carefully bring together edge to edge the tendinous insertion of the oblique muscles. The fat and loose cellular tissue above can be brought together in one or two tiers, according to thickness. Bring the skin together carefully with Marcy's cobbler stitch, thus burying all your sutures. Then seal with collodion.

3. In cases of extensive umbilical, ventral or other hernias, it is best to bring the peritoneum together with an over-and-over stitch of kangaroo tendon or catgut; to make a flap splitting operation of the ring, which is brought together with silkworm, gut or silver wire, which are buried, and then the fat and skin are united with the buried animal suture.

MEDICAL NEWS AND NOTES.

The Archives of Pediatrics.

This excellent journal will commence its thirteenth year with the January number, under the business management of E. B. Treat, Publisher, of New York, long identified with medical publishing interests. The Archives has been for twelve years the only journal in the English language devoted exclusively to diseases of children, and has always maintained a high standard of excellence. The new management propose several important changes in its make-up; increasing the text fifteen per cent. and enlarging its scope in every way. This will give room for the fuller contributions and additional collaborators who have been secured for the various departments, all of which give promise of a more successful era than has been known even in the already brilliant career of the journal.

The editorial management will be in the hands of Floyd M. Crandall, M.D., Adjunct Professor of Pediatrics, New York Polyclinic, and Chairman of Section on Pediatrics, New York Academy of Medicine.

American Electro-Therapeutic Association.

The fifth annual meeting of this society was held in Toronto, Canada, on Tuesday, Wednesday and Thursday, September 3rd, 4th and 5th, 1895. The session were well attended. The first day's session began at ten o'clock, on Tuesday morning, the President, Dr. A. Lapthorn Smith, of Montreal, introducing Dr. James Thorburn of Toronto, who welcomed the visiting members on behalf of the resident profession. Dr. Charles R. Dickson in an address also welcomed the members. The President then read his address, on "Electro-Therapeutics in General Practice." This was followed by the reading of the reports of the Committees on Scientific Questions. Then followed the reading of the papers in their regular order, as per accompanying list. In the evening the members were invited by the President of the Toronto Street Railway to a ride around the city. in his private car. Mr. James Gunn, the Superintendent, showed the members the power house of the company.

The second day's programme was carried out as per schedule. The election resulted in the selection of the following officers for the year 1895-1896, viz: President, Dr. Robert Newman, of New York city; vice-presidents, Dr. Holford Walker, of Toronto, Canada, Dr. D. B. D. Beaver, of Reading, Pa.; treasurer, Dr. R. J. Nunn, of Savannah, Ga.; secretary, Dr. Emil Heuel, of New York city; Executive Council, Dr. W. J. Morton, of New York city, Dr. G. Betton Massey, of Philadelphia, Pa., Dr. W. J. Hardman, of Ann Arbor, Mich., Dr. Emil Heuel, of New York city, Dr. Wendell C. Phillips, of New York city.

In the evening the resident profession, who had taken a lively interest in the proceedings of the association, tendered to the members a reception at the Toronto Athletic Club. The Chairman of the Committee of Arrangements, Dr. Charles R. Dickson, had arranged a very fine concert, which was followed by a collation. The third day was devoted to the transaction of unfinished business. To the labors and influence of Dr. C. R. Dickson, the members enjoyed a very pleasant afternoon at the Toronto Exposition, as the guests of the President of the Exposition, Mr. John J. Wittrow. It was decided to hold the next, the sixth annual meeting of this association, in Boston, Mass., in the latter part of September, 1896.

Recent Immigration.

From July 1, 1894, to April 1 of the present year, a period of nine months, 140,980 immigrants came into this country. The number debarred from landing was a little over one per cent. Three were turned back because they were idiots, 11 because they had been convicts, 353 because they were contract laborers, and 1,071 because they were paupers. Fifteen per cent. of the whole number were unable to read or write. The percentage of those who could not read or write was only 2 among the Scotch immigrants, 3 among the English, 7 among the Welsh and Irish, 26 among the Russian, 29 among the Austro-Hungarian, 31 among the Polish, and 36 among the Italian.

What American citizen does not feel sad at such a statement as this? More than that, a very large proportion of the immigrants that come to this country are not skilled workmen. We have not at hand the statistics for 1894, but the Immigration Restriction League, that is responsible for the previous statistics, says that in 1893 the number of skilled immigrants from Scotland was 1 in 4; from England and Wales, 1 in 5; Belgium, 1 in 7; France, 1 in 9; Germany and Norway, 1 in 10; Italy, 1 in 14; Russia, 1 in 18; Poland, 1 in 23; and Austria-Hungary, 1 in 29.

The Gauls swept down on Rome in great masses and destroyed it; but the question is whether a large multitude are not coming one by one to eat into and eat up our institutions. Let the Immigration Restriction League of the United States redouble its energies and examine carefully all applicants. The officers can serve this country by admitting to it only those who possess the inherent qualities of self-support or bring money enough with them to show that they will not be dependent upon us. Now the total money brought by all those who have come to this country from July 1 of last year to April 1 of this year amounts to no more than seventeen dollars on the average per head; eighty-five per cent. of them can do nothing at all worthy of being called skilled labor, fifteen per cent. cannot read, and sixty per cent. have been brought up to hate governments as engines of oppression, and are without any knowledge of or sympathy with the traditions of this country.—Christian Advocate.

Louis Pasteur.

Like many men who have later in life attained positions of distinction, Pasteur was of extremely humble parentage, and gained his early education under the stress of poverty. He was born at Dole, in the Department of the Jura, December 27, 1822. He became at eighteen a member of the university, in the difficult situation—corresponding to that of a sizar in England—of a supernumerary master of studies at the College of Besançon. At twenty-one he was admitted as a pupil to the normal school. He was a graduate in the physical sciences in September, 1846, but he remained at the school two years longer as an assistant instructor in chemistry, obtained a doctor's degree and received the appointment of professor of physics at the Lycée of Dijon. Then his long years of comparative poverty came to an end.

At an early age it was evident wherein his genius lay, and shortly after his graduation at the Ecole Normale, and his attainment of the doctor's degree, he was appointed professor of physics at Strassburg. This was in 1848, in his twenty-sixth year. Later, in 1854, he became dean of the newly-created Faculty of Sciences at Lille, and in 1857 returned to Paris to undertake the scientific direction of the Normal School.

From this time on honors crowded upon him. He became a member of the Legion of Honor in the year 1853, received the Rumford medal of the Royal Society of London in 1856, a reward of 10,000 florins from the Austrian Ministry of Agriculture and the rank of Commander of the Legion of Honor from the French Emperor in 1868, a degree appointing him a senator in 1870, a premium of 12,000 francs from the French Societe d'Encouragement in 1873, the Copley medal from England, and an annuity of 12,000 francs from the Assemblee Nationale in 1874, the rank of Grand Officer of the Legion of Honor in 1878, election as a member of the Academe Francaise, to succeed Littre, and the Albert medal of the Society of Arts in 1882, and the magnificent laboratories of the Pasteur Institute in Paris, built by popular subscription, and a liberal contribution from the Czar of Russia. Roty, the excellent medallist, produced in 1892 a commemorative medal of him.

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When a woman misses her menstrual period, she at once thinks of pregnancy, and under certain circumstances, such as the desire for children, or, on the other hand, the absence of a marriage tie, she becomes very anxious to know the facts early. Is it possible to tell her? Dr. Charles P. Noble says: It is possible ninety-nine times out of a hundred, by bimanual palpation, to determine definitely between the sixth and twelfth weeks. He relies particularly on Hegar's sign, of which little or nothing is said in the text-books on obstetrics. This concerns the relation of the cervix to the body of the uterus. The shape of the unimpregnated uterus is pyriform, flattened from before backward. When the cavity of the uterus contains a growing ovum, the corpus and fundus develop with great rapidity, while the cervix grows but slowly. By six weeks the ovum has grown sufficiently to make the corpus spheroidal in shape, while the cervix has altered very little. Thus there is formed a spheroidal body resting on a cylinder, and the sphere juts out from the cylinder prominently in every direction. The corpus, too, is softened, and gives a sense of semi-fluctuation when palpated bimanually. Only two other conditions besides pregnancy can cause this sign: (1) Hematometra, due to imperforate cervix, which is very rare and has a suggestive history. (2) Intra-mural fibroid, which does not give semi-fluctuation nor uniform enlargement of the uterus. Corroborative evidences of pregnancy, in the early months, are, violet discoloration of the vagina, most marked beneath the urethra, and velvety softness of the vaginal walls, with marked pulsation in vaginal and uterine arteries. Softening of the cervix Noble considers of much less importance than is usually assigned to it, and a sign on which very little dependence can be placed. Landau (Deutsche med. Wochenschrift) says the size of the uterus in the first months is much less to be considered than its form and consistence. Anteflexion is increased, the portio is higher, the vagina longer, and the anterior vaginal wall seems stretched. The consistence is softer, and gives a sensation as if the examining finger was against soft butter—it penetrates, finds no resistance, and leaves no imprint.—Med. Times.

MISCELLANEOUS.

Basedow's Disease and the Thyroid Gland.

Eulenburg (Deut. med. Woch.,) first refers to the disturbed functions caused by the absence of the thyroid gland. The objections to the thyroid theory of Basedow's disease are that (1) enlargement of the thyroid may be absent; (2) the palpitation or exophthalmos may be present long before the goitre; and (3) large goitres may exist without symptoms of Basedow's disease. On the other hand, a slight enlargement can escape notice, or the enlargement may take place into the deeper tissues, and changes may thus exist in the gland without being appreciated. The objections concern the mechanical rather than the chemicotoxic theory of the part played by the thyroid gland. Moebius drew attention to the contrast between the symptoms of Basedow's disease and myxœdema, and the latter has been known to follow on the former. The chemical theory of the normal functions of the thyroid supposes the restruction of some baneful substances in the blood by the healthy gland, or more probably the production of a substance by the gland very important or absolutely necessary to life. Since the thyroid cannot be stimulated to secretion through its nerves (as shown by Hurthle), it would appear that the state of the blood must supply the necessary stimulus. Basedow's disease may be due to a progressive increase in the thyroid secretion. The quantitative changes in the blood in this disease are seen in the greatly increased vascularity of the thyroid gland, whereas qualitative changes, also influencing secretion, are illustrated by the disease occurring in chloro-anæmia, after acute infective diseases, etc. Ligature of the bile ducts has been shown to lead to an increase in the thyroid secretion. Toxic products are found in the blood in Basedow's disease. The secretion of the thyroid may also be more rapidly absorbed. The therapeutic test of the thyroid origin of this disease, whether by the improvement in the quality of the blood or by the lessening of the secreting surface of the gland by extirpation, must not be over-estimated.—Br. Med. Jour.